Institute for Economy in Transition
Analytical Centre
AGRIFOOD ECONOMY

Farm Profitability, Sustainability, and Restructuring in Russia

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103918, Russia, Moscow, Gazetny pereulok 5
Tel./Fax (095) 229-65-96, e-mail afe@iet.ru
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On 1 and 2 October, 1999 a seminar "Farm profitability, sustainability and restructuring" was held in the training centre "Golitsyno"(Moscow region). The seminar was arranged by the Analytical Centre "AGRIFOOD ECONOMICS" (AFE) under the financial support of the US Agency for International Development (USAID). The objective of the seminar was to discuss the farm privatisation and restructuring outcomes as well as the efficiency of agricultural production, and to work out recommendations for federal and regional authorities relevant to the elaboration of national agrarian policy.

The seminar was attended by representatives of the Federal Assembly, regional administrations, high-ranking officials of the Ministry of Agriculture and Food and the Ministry of Economy, by Russian and foreign experts in the agrarian economic issues, representatives of producer associations and private companies.

Outcomes of the land privatisation and farm restructuring in Russia in the course of agrarian reforms of the 90's, the reform practice in selected Russian regions as well as the experience of agrarian reforms in the CEE and other countries have been discussed.

Foreign agrarian researchers shared the experience of agrarian reform in the CEE countries, e.g. in Czechia (report of Prof. T. Doucha "Czech Agriculture 1998: situation and problems) and Hungary (report of Prof. T. Ferenczi "Farm Profitability, Sustainability and Restructuring in Hungary"). Besides, the following reports of US scientists were presented and discussed: Prof. W. Thiesenhusen "Principles of Successful Agrarian Reforms" and Prof. B. Gardner "Issues on the Privatisation and Restructuring of Russian Agriculture: Comments on papers". A keen

interest was aroused by the report of the World Bank representative Prof. Zvi Lerman on the comparative analysis of agrarian institutions' evolution in developed countries, NIS and CEE countries.

A draft closing document ensuing from the reports and exchange of opinions was suggested to be further discussed with representatives of the Russian establishment and business circles. It contained the appraisal of agrarian reforms' implementation in the country, the description of institutions that have recently emerged in the agrarian sector and the evaluation of their efficiency, as well as the outlook for the future of national agrarian economy. The working out of a closing statement stirred up a heated discussion. Despite common views on the situation in the agrarian sector, it turned out to be rather difficult to reach a consensus on defining the group of operators that will shape the agrarian sector's development: whether this will be large-scale collective farms, corporate agricultural enterprises or family farms.

The draft closing statement prepared by the seminar participants was discussed and generally approved in the course of the following day's discussion with representatives of the Russian establishment, private companies and producer associations.

The closing statement, in particular, emphasised changes that have occurred in the sector structure of agricultural production: the declining share of large farms in the production of gross agricultural output and the changing of their legal status; the growing role of individual agricultural producers (household plots and individual private farms); the transformation of land ownership rights and the creation of conditions for land turnover.

The seminar participants stated that the growth of efficiency in the agrarian sector is retarded by the lack of macroeconomic stabilisation in the country, poor development of market infrastructure and expanding regional barriers, the continuing state support of inefficient farms, contradictions between federal and regional approaches to the reforming, the lack of public consensus regarding the reforms.

The seminar participants proposed measures the implementation of which would improve the efficiency of agricultural production. The closing statement was signed by most of them. It is supposed to be disseminated among political, scientific and business circles of the country.

The Impact of Privatization and Farm Restructuring on the Russian Agriculture

Serova E.V.[*]

Abstract

The paper[1] is devoted to the changes in Russia' s agriculture under the reforms undertaken in the 1990s. The new structure of agriculture having emerged in the reform process is considered. It is shown that the economic behavior of agents on the agricultural markets has notably changed towards a more market oriented one. Each sector of the Russia's agriculture (private family farming, households, and large-scale farms) is considered from the point of view of its role in the entire economy, size, legal and economic status, as well as its development perspectives. The land market emerging is also addressed.

1. Introduction

At the end of the centrally planned economy in Russia in the mid-1980s, the Soviet type of large-scale farming demonstrated the growing inefficiency and burdened the national budget to a great extent, while food shortages were permanent. The numerous and compelled attempts to restructure the agrarian sector in the framework of socialist economy had failed, and the radical changes had become unavoidable.

The basic features of the concept of farm restructuring in Russia were elaborated still in the USSR and were determined by the particularities of Russia. One of the main particularities was that the majority of rural population did not want to quit large-scale farms for individual farming, that a number of national and sub-national polls showed. Another particularity was connected with the long time that had passed after collectivization, making a restitution process impossible. Still in the USSR the first individual farms were set up, changes in the land tenure began and initial ideas of land and asset sharing in *kolkhoz*es and *sovkhoz*es were raised.

∗ President of the Analytical Centre "Agrifood Economy" (AFE) (Moscow), Econ. D., Professor

[1] This paper is based on the wide report prepared under the supervision and financing of the USAID by a collective of authors: Eu.Serova, V.Mogilevtsev, I.Rtishev, and D.Emilin.

However, the radical stage of agrarian reforms was pushed forward by the collapse of the USSR in late 1991. The reform was targeted at the creation of market oriented production units by facilitating the withdrawal of rural workers from large-scale farms and the transformation of former *kolkhoz*es and *sovkhoz*es. The free distribution of land and non-land asset shares among employees and pensioners of large-scale farms was the fundamental principle of the Russian farm restructuring concept. These shares are conditional (a land share is not demarcated on the ground) and transferable (a holder can sell or rent his land share, pass it to the heirs and use as a collateral) and can be allotted in the physical form in case of quitting large-scale farms.

After seven years of the agrarian reform's implementation in Russia, the farms' restructuring process has not yet achieved the initial objectives: the major part of existing agricultural producers are still non-market-oriented units. The modest results of the reforms can be explained by the economic, legal, mental, and political constraints. Recession does not create economic incentives for the production units and, therefore, does not induce their real transformation. In such circumstances the bulk of farms, irrespective of their legal form (collective or individual), tends to follow the survival patterns of behavior.

Russia has no deep traditions of the legal democracy and of the strict execution of the law. Many adopted pieces of legislation are not actually implemented anywhere or in a number of regions. The contradictory and non-comprehensive nature of the reform legislation aggravates the problem.

The agrarian reform in Russia is carried out under the lack of political consensus regarding this reform in the society, and this severely hampers the restructuring of the sector.

The agrarian reforms are also hindered by the mental prejudices accumulated during the Soviet period, which retard emerging of entrepreneurial activity in the countryside. On the other hand, the agrarian reforms stumble over the quality of rural population, which to a great extent is not capable to adjust to the new circumstances.

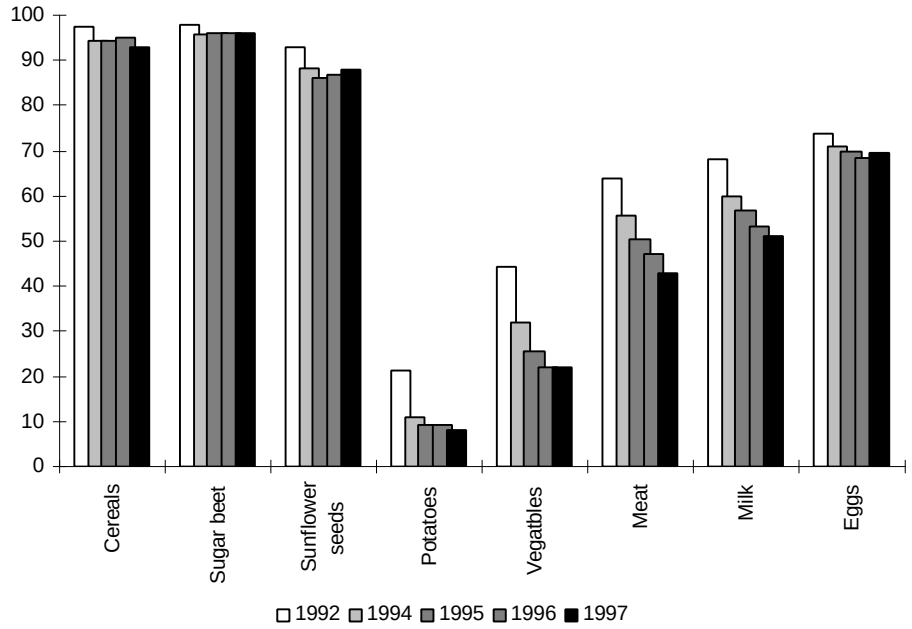
However, despite numerous constraints the farming structure in Russia has been changed notably during the period of reforms.

2. General description of farms' restructuring results

First, an absolutely new sector has emerged: the sector of individual private farmers. The significance of this sector should be measured not by its share in the GAO but by its catalyst role in the Russian rural economy. The farm restructuring also led to the tremendous increase and strengthening of the household production both in rural and urban areas. The large-scale enterprises, however, remain the major agricultural producers in Russia, but nowadays they are new production units operating in the completely new economic environment. As in all other transitional economies, farmland market in Russia is poorly developed: less than 0.5% of farmlands annually participates in land transactions. However, the adopted concept of farm restructuring and land privatization gave rise to the para-market of land shares.

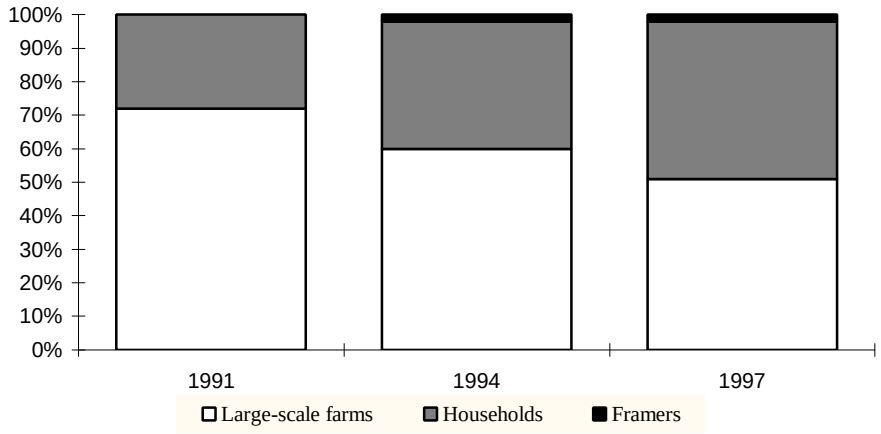
These changes caused notable shifts in the structure of the GAO, land use and labor in agriculture (Figure1 -4). Thus, the share of households in the GAO has amounted to almost 50%. After 70 years of state land monopoly the share of state-owned farmlands has decreased to one third, while the rest of lands belongs to individuals or to collectives of individuals. During the reforms the employment in large-scale farms has shrunk by 45%; at the same time the number of people involved in household agricultural production has doubled, a new type of agricultural employment has emerged - self-employed individual farmers and their hired workers.

Figure 1. Share of large-scale farms in the production of principal agricultural products, %



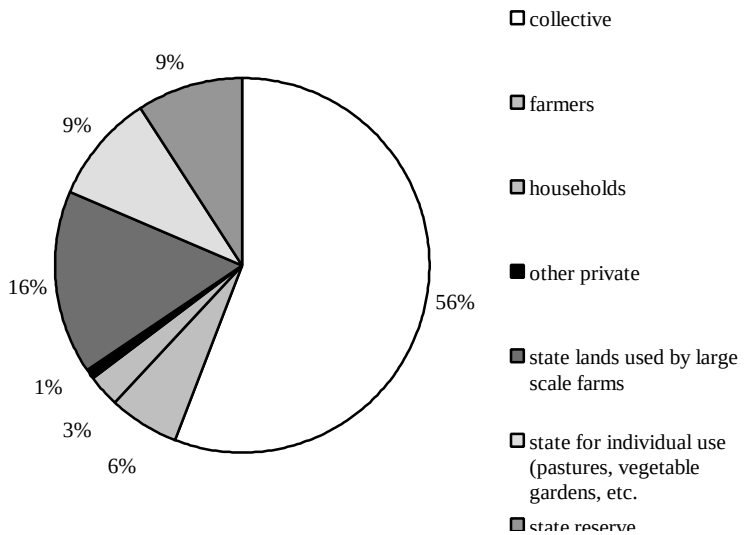
Source: Data of the Goskomstat.

Figure 2. Sector structure of the GAO



Source: Data of the Goskomstat.

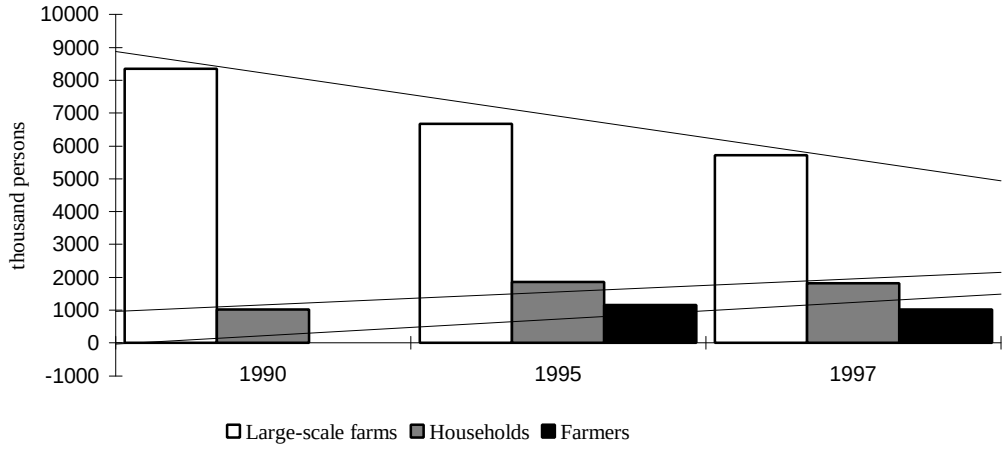
Figure 3. Sector structure of the farmland ownership, as of January 1, 1998*



* Before the reforms all lands belonged to the state.

Source: Data of the Land Committee.

Figure 4. Sector structure of the farm labor



Source: Data of Goskomstat.

3. The changes in farms' economic behavior

Beside the structural changes, the reforms also led to the emergence of new behavior patterns in the agrarian sector. The lack of endogenous economic incentives for the farms was one of the major problems of the Soviet agriculture for decades. State inputs distribution and party discipline were the principal leverages to increase farm output.

In the 1980s, there was a lot of attempts to reduce the volume of state purchases, to induce some quasi-market system. However, all these partial changes of the system did not and principally could not solve the incentive problem in the framework of the State agriculture.

In 1986, in order to increase the incentives for Soviet agriculture the government allowed to sell on the "open market" up to 1/3 of the total output of the farms. As a result, in 1988 only a few per cent of output was actually sold not to the state procurement agencies. The highest percentage was achieved for fruits - 6%. The survey of the best managers of that time showed that they did not consider large revenues as the aim of their enterprises and moreover, considered marketing to be an unnecessary activity for the farm management. On the other hand, in the Soviet economy there was only one legal institution, that could be regarded as an open market - town markets (*kolkhoz* markets in the township). The capacity of these markets did not allow to absorb the output of large-scale producers, and therefore large farms could not find the markets for real bargaining.

In 1991, the last centralized raise of the purchase prices for agricultural products was done. As input prices and interest rates were not changed at that time, the inflating of output prices should have led, *par se*, to the growth in production[2]. However, prices did not play the role of incentives for *kolkhoz*es and *sovkhoz*es. These producers, in spite of the strict state control over production, kept on reducing areas of the crops and population of the animals, which were not interesting from the point of view of real incentives of the centrally planned economy. Table 1 illustrates the impact of the last price raise on the production of basic agricultural products. The correlation between changes in prices and in production indices was negative.

[2] The effect of the back sloping supply curve could not occur in the Soviet economy as it is a phenomenon of small-scale family farming.

Table 1. The impact of purchase prices on the economic behavior of agricultural producers in the pre-reform period (change of purchase prices of 1991*)

	Index of purchase prices, 1991 as % of 1988	Index of planted area, 1991 as % of 1986-90 average	Index of animal population, 1991 as % of 1988	Index of output, 1991 as % of 1986-90 average
Grain	150	94	-	85
Sunflower seeds	104	105	-	93
Flax fibber	182	68	-	81
Sugar beet	113	95	-	73
Milk	118	-	97**	93
Cattle	146	-	94	94 (meat)
Hogs	160	-	91	
Sheep and goats	138	-	93	
Poultry	168	-	98	
Wool	151	-	-	91
Eggs	100	-	-	98
Correlation coefficient between correspondent indicator and price index	-	-0.91379	-0.3732	-0.12259

*- input prices and interest remained unchanged, therefore, the output prices' raise, *par se*, should have created incentives for producers; ** - number of cows.

The economic liberalization from the very first moment increased the agriculture's responsiveness to demand signals. Despite the underdevelopment and the lack of transparency of the markets, farms in general began to react adequately to the price incentives.

Thus, already in 1992, there was a growth in output of some cereals which were in permanent deficit in the Soviet period in spite of several attempts to make their production attractive by the raise in purchase prices (e.g. buckwheat: since 1992 Russia is fully self-sufficient in this crop).

Sunflower seeds are the major item of the Russian agricultural export and the only commodity with positive trade balance among all the agri-food tradables. Due to that sunflower seeds are the most profitable agricultural products. The area under this crop was growing almost all the years of reforms despite the overcropping of soils in the regions concerned.

Being fully aware that margin/price ratios[3] do not completely represent the economic incentives for agricultural producers as well as that the measuring of these ratios is not relevant in transitional conditions, the author, nonetheless, tries to reflect in a simplified form the reactions of agricultural producers to the changes in these ratios. As output and yields are very dependent on weather conditions and do not reflect the intentions of producers, we take the crop areas and animal numbers to learn the reactions of producers to changes in the margin/price ratios. The figures are taken for all sectors of farming. Results are presented in Table 2.

Table 2. The impact of margin/price changes on the production behavior of agricultural producers in Russia

	1993	1994	1995	1996	1997
Year-to-year indices					
cereals areas	0.98	0.92	0.97	0.98	1.00
sunflower seeds areas	1.01	1.07	1.32	0.94	0.93
cattle numbers	0.94	0.89	0.91	0.89	0.90
cow numbers	0.98	0.93	0.95	0.91	0.92
hogs numbers	0.91	0.87	0.91	0.85	0.91
Margin/price, %					
Cereals	190	59	55	42	24
Sunflower seeds	N/A	145	134	30	18
Beef	64	-16	-20	-47	-55
Milk	8	-26	-1	-34	-33
Hogs	52	2	-4	-31	-31
Coefficients of correlation between indices and margin/price					
Cereals	x	x	x	x	0.048
Sunflower seeds	x	x	x	x	0.781
Beef	x	x	x	x	0.950
Milk	x	x	x	x	0.438
Hogs	x	x	x	x	0.795

Source: calculations based on the data of Goskomstat and MAF.

[3] margin = price of marketed product - related to this product production costs. Margin/price ratios are the major characteristics of the profitability of a product in the USSR and the Russian Federation.

Comparing Table 1 and Table 2 one can notice that the correlation between changes in production and market signals turns to be positive and significant for the majority of products during the reform period.

The insignificant meaning of coefficient for cereals might be due to the aggregation of all kinds of cereals[4]. During the examined period the trends for areas of feed cereals and food cereals were opposite which the aggregate figures do not reflect. However, the changes in margin/prices ratio for grain affect the spatial structure of cereal production in Russia. Thus, the variation of margin/price ratios for cereals by Russian regions in 1996 correlates with the variation of changes in cereals areas by these regions in 1997 (k=0.686).

So, the reforms in Russian agriculture made producers more oriented to market signals.

With the lifting of the system of mandatory deliveries to the state reserves, new food chains began to emerge. Farms got the freedom to chose buyers of their produce and therefore, to maximize their profits (minimize the losses). The most advanced farms market their products through private traders, on the wholesale markets, fairs. They turn the management emphasis from production task to the marketing task which is a the tremendous positive shift after the decades of centrally planned economy.

Table 3 displays the average data on marketing channels for three regions of the European part of Russia. Among them there was Pskov with very poor development of food chain and greatly deteriorated agriculture, Orel with rather apparent state intervention into the agri-food markets at that time, and Rostov with rather liberal regional policy and developed markets. Thus, Rostov producers are much more oriented to the commercial marketing channels: there are more advanced intermediate institutions in this oblast, producers more frequently utilize commodity exchanges and wholesale markets, and are more flexible in the choice of channels. It is also necessary to emphasize that each farm can make deliveries not only to a single processor and not only in the same rayon. For the Soviet economy it was outstanding.

Table 3. Channels of marketing agricultural products, as % of gross output (in physical terms), 1994-1995*

[4] The disaggregated margin/price ratios for different kinds of cereals are not available.

Channels	wheat	barley	potatoes	milk	cattle
Processors	39	5	0	75	63
Procurement agencies, consumer co-ops	5	24	8	6	3
Retail network	0	1	0	1	3
Town markets, retailing from trucks	0	0	0	8	2
Intermediates	3	13	12	0	2
Direct deliveries	4	3	6	0	2
Fairs, wholesale markets, exchanges	0	8	0	0	0
Barter	16	5	2	0	4
Payments in kind to employees	4	2	1	1	1
Sales to households	9	9	31	2	15
Sales to other farms	3	8	0	0	1
On-farm disposal	14	22	40	6	3
Other	1	0	0	1	2

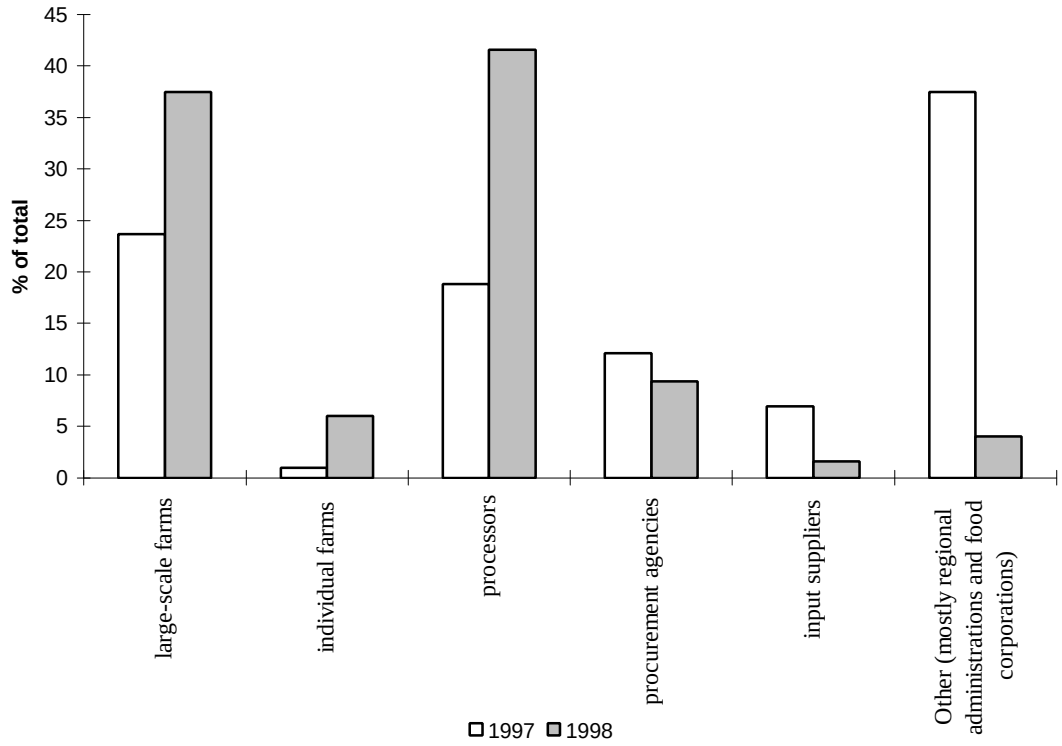
* - the results of survey of 89 large-scale farms in Orel, Pskov, and Rostov oblasts carried out by IET and University of Kiel (led by Prof. J. von Braun and Prof. Eu.Serova)

The agricultural credit system development has begun to school rural management to the financial discipline, though the just started process was interrupted by economic crisis of 1998.

The survey of lending practice of the SBS-Agro bank in 5 typical agricultural regions of Russia proved that the payment back of loans did not depend on the legal form of a farm. Because of the deep indebtedness of farms banks were to allocate loans not directly to the farms but to the up- and downstream sectors as well as to the regional administrations. But the experience of two years demonstrated that the worst borrowers were administrations and input suppliers. The best payers were processors and traders. However, it's notable that agricultural producers started to pay back (Table 4,Figure 5). Definitely, it was determined by the fact that banks tended to lend to the farms with relatively high solvency, but still it was a new situation in the Russia's agricultural credit system.

Besides, indicates that banks tend to increase loans to the types of borrowers which have paid back in the previous season. Thus, in 1998, the administrations and suppliers in the sampled regions got much smaller amounts of loans than in the previous year, while farms (both large-scale and individual) and processors - much bigger ones.

Figure 5. Distribution of loans from the Fund of Soft Credit to Agroindustrial Sector by types of borrowers. SBS-Agro, 5 regions*



* - Belgorod, Kursk, Lipetsk, Omsk, Tambov.

Source: Data of the SBS-Agro.

Thus, the credit in agriculture has started to become a market tool targeted at the most efficient farms, while the non-efficient farms are to rely upon subsidies of the local administrations and to maintain survival behavior. The recent crisis in Russia greatly affected this emerging agricultural credit system and since now the centralized credit is very likely to be again the major source of agricultural finance.

Table 4. Dependence of the non-paid back debts and the rate of growth in loans by types of borrowers. SBS- Agro, 5 regions*

	1997		1998		Loans of 1998 as % of loans 1997
	loans, 1000RUR	non-paid debts as % of loans	loans, 1000RUR	non- paid debts as % of loans	
large-scale farms	158 759.3	9	102 718.5	0.5	688.9
individual farms	6 411.0	6	16 508.4	0.2	4 644.3
Processors	126 416.2	4	113 993.3	0.2	2 403.4
procurement agencies	81 334.7	1	25 712.4	1.1	6 014.4
input suppliers	46 550.0	89	4 317.1	0.2	10.5
Other (mostly regional administra-tions and food corporations)	251 290.4	49	11 085.0	0.9	10.4
Total	670 761.6	28	274 334.7	0.4	162.9

* - Belgorod, Kursk, Lipetsk, Omsk, Tambov.

Source: Data of the SBS-Agro.

4. Individual farming

The increase in numbers of individual private farms has become the most notable prompt result of the farm restructuring. Despite speedy growth, the share of individual farming in the total agricultural production remains insignificant. Moreover, since 1994 this growth has slowed down notably. It was due to several reasons: households intent to run their own farms had withdrawn from large-scale farms up to that time, new volunteers did not appear as the governmental support to this sector had been reduced. Not last was the quality of rural population restricting its capability for individual farming.

Table 5. Indicators of individual private farmers

	1991	1992	1993	1994	1995	1996	1997	1998
Number of farms, as of Dec. 31, thous.	49	182	270	279	280.1	279	274	270
An average size of farm, hectares	41	42	43	43	43	44	48	51
Share in the total farm lands, %	...	3.4	4.9	5.0	5.0	5.3	5.8	5.8
Share in the output of selected agricultural products, %:								
GAO	...	1	2	2	2	2	2.1	2
grain	0.2	2.1	5.2	5.1	4.7	4.6	6.2	6.6
sunflower seeds	0.4	5.8	9.9	10.2	12.3	11.4	10.6	11.0
sugar beet	0.03	2.0	3.9	3.5	3.8	3.3	3.5	4.0
potatoes	0.3	0.8	1.0	0.9	0.9	0.9	1.0	1.0
meat (live wt.)	0.1*	0.7*	1.1	1.4	1.7	1.8	1.6	1.6
milk	0.1	0.5	1.1	1.3	1.5	1.8	1.5	1.6

* - Carcass weight.

Source: Data of the Goskomstat.

But in our view there is a more profound reason for that: as a matter of fact small-scale farms turn to be not competitive with large-scale farms in terms of access to market infrastructure. Processors, traders, financial institutions tend to deal with large units in order to reduce their transaction costs. Small-scale farms could survive in these circumstances only in cooperatives (marketing, supply, credit co-ops), but due to the plenty of social, psychological, legal and economic reasons farm co-ops are not developed in Russia. The survey of the IET and University of Kiel in three regions of Russia showed that processors prefer to contract big suppliers of raw materials, rather than small producers. The banks authorized to lend from the Fund of Soft Credit to Agri-food sector had actually lent to individual private farmers only 2.8% of the total distributed amount of credits in 1998. At the same time according to the governmental decisions individual farmers were to get not less than 15%.

Being the most market oriented production units, individual private farms are specialized mostly in the major cash crops such as cereals and sunflower seeds. Livestock husbandry as the most loss-making and labor intensive branch of agriculture is modestly represented in the individual private sector. The revenues from farming have become the major source of incomes for individual farmers. Thus, the monitoring of individual

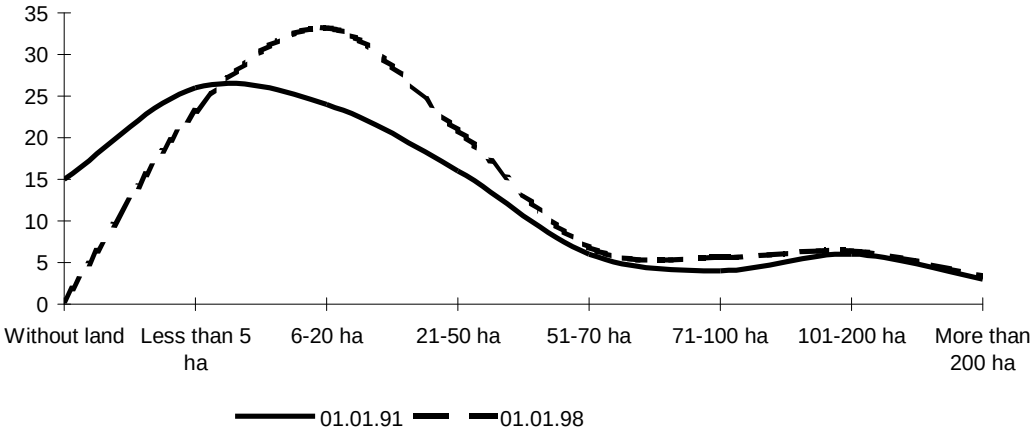
farms in the first experimental *rayon* - Pytalovo (Pskov *oblast)* demonstrates that while in 1989-1990 the money revenues and products from farming made up 38% of the total revenues of private farmer families, in 1993 - already 51.3%, in 1996-1997 - 87%. More than half of farmers' family members continued to work in large-scale farms in 1989-1990, while in 1998 - only 15%. Thus, individual private farmers have become more independent from the large-scale farm sector of agriculture.

The slowing down of growth in the number of individual farmers does not mean the halt of this sector's development: during the reform years the average size of private family farms has increased. This growth was especially inspired by the conclusion of formal contracts between land users and land shareholders for the rent or purchase of their shares in accordance with the legislation of 1996 (The President Decree "On Realization of the Constitutional Citizens' Rights for Land", 7.03.96).

While during all the reform years the average size of an individual private farm was around 43-44 ha, in 1998 it exceeded 50 ha. In certain regions it has jumped by more then 20 ha. This phenomenon is largely due to the registration of the right to use land shares. In many cases individual farmers propose more attractive lease terms to the land shareholders which leads to the re-distribution of shares in their favor (usually pensioners and employees of the social sphere rent their shares to individual farmers).

The mentioned President Decree is still not fully implemented: by the mid-1998, only 42% of all land shareholders have concluded legal contracts on the use of their shares.

Figure 6. Distribution of individual farms by the size of farmland, %



Source: Data of the Goskomstat.

The legal and statistical definitions of the individual private farms do not allow to distinguish precisely individual private farms from household production, on the one hand, and individual private farms from corporate farms run by one family, on the other. So, all the conclusions on the sizes and size distribution of individual farms are not perfectly correct.

Farms established before 1992 are much better equipped with machinery than those, that emerged later (Table 6) because then credit was more available for farmers and input/output price ratios were still supported by the state regulation. This trend is particularly apparent for the large equipment: tractors, trucks, and harvesters. Partial observations in later years indicate the continuation of the above trend: the later a farm is established, the worse it is equipped.

Table 6. Machinery per 100 individual farms, units

	Average	Groups of farms established in:			
		before 1992	1992	I-VI, 1993	VI-XII, 1993
Tractors	79	121	75	57	29
Trucks	42	61	41	31	19
Grain harvesters	20	28	20	17	4
Ploughs	43	67	42	29	15
Seed drills	35	51	35	28	8

Source: Survey of 28 500 individual farms carried out by the MAF in 1994.

The survey of 1994 had also indicated that up to 95% of equipment was in farmers' ownership and only around 5% were rented. Individual farmers tend to have all the equipment in ownership, they mostly do not

trust any pools, cooperative efforts, etc. This is a mental reaction of entrepreneurial people to the years of official collectivism.

The state support of individual farms was significant in the early 1990s and the farms set up at that time are on the average better equipped and more viable. Later the state financial support of the sector of individual farms was almost abolished and the development of the sector was suspended (Table 7).

Table 7. State support of individual farms' sector, federal and regional levels

	1991	1992	1993	1994	1995
Total, mln. RUR (fixed prices of 1991)	117	1519	842	500	194
of which as % of total:					
migrants assistance	3.3	14.5	20.7	1.1	1.2
tax release	0.0	1.5	3.9	3.9	5.5
Construction	29.4	5.8	11.6	26.0	21.8
loan guarantees	26.8	47.6	30.6	16.8	2.7
interest compensation	0.0	30.6	32.7	47.0	20.1
budget loans	40.4	0.0	0.0	3.2	36.3
Other	0.0	0.0	0.6	2.0	12.5

Source: Data of the MAF.

5. The household production

The increased significance of household production has become a notable change in the agricultural structure within the reform period. Reforms have eliminated all restrictions on that sector's development existing in the Soviet time. The abolition of mandatory deliveries of their produce to the state let large-scale farms to distribute a growing part of output to the farm workers (in the form of payments in kind, sales at lower prices, etc.) which also improved the conditions for household production. Besides, the fall of discipline led to a widespread stealing from farms that actually broadened the access to inputs for households. The economic instability and the growing unemployment make subsidiary food production attractive to the urban population as well.

Therefore, the share of the GAO produced in households amounted to almost 50% and is steadily growing during all the reform years (Table 8).

Table 8. Share of household agricultural production in the GAO and output of selected products, %

	1991	1992	1994	1995	1996	1997	1998
GAO	28	32	43.8	46.6	47.4	43.7	N/A
Grain	N/A	0.5	0.7	0.9	0.8	0.8	1.0
Sugar beet	N/A	0.2	0.7	0.7	0.7	0.8	0.8
Sunflower seeds	N/A	1.2	1.6	2.0	1.6	1.4	1.5
Potatoes	72	78.0	88.1	89.9	90.2	91.3	91.1
Vegetables	46	54.7	67.0	73.0	76.8	76.4	79.6
Meat	31	39.5	43.2	48.6	51.6	55.9	N/A
Milk	26	31.4	38.7	41.4	45.4	47.2	N/A
Eggs	N/A	0.1	0.1	0.3	0.4	0.4	N/A

Source: Data of the Goskomstat.

At the same time, the share of households in the marketed output is relatively modest (Table 9).

Table 9. Share of sales in the gross output of households, selected products, %

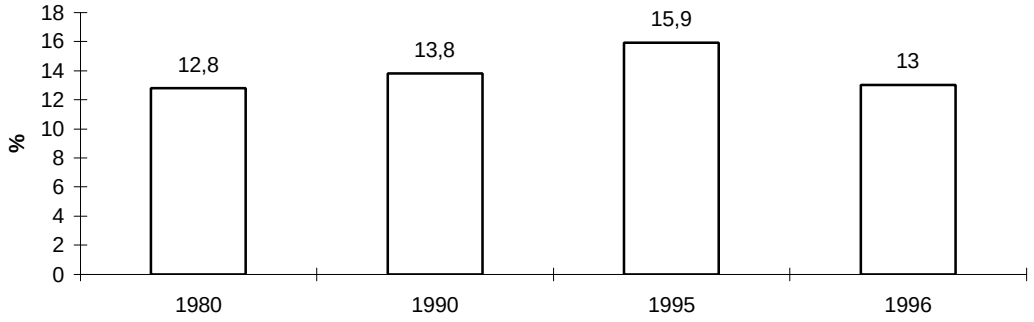
	1992	1993	1994	1995	1996	1997
Meat	31	30	52	37	37	37
Milk	20	20	28	18	18	19
Potato	27	29	17	12	10	10
Vegetables	13	14	12	9	9	9

Source: Data of the Goskomstat.

The size and the role of household plots, the income derived from this subsidiary production have not changed importantly during the reforms. Their market share is rather small and surveys show that households do not tend to expand sales. The major target of household production remains the same as in the Soviet economy - food supply for family and relatives in urban areas.

Due to the low share of marketed output in households, the share of money incomes from subsidiary production in the total money incomes of rural population has not changed significantly during the reform years (Figure 7).

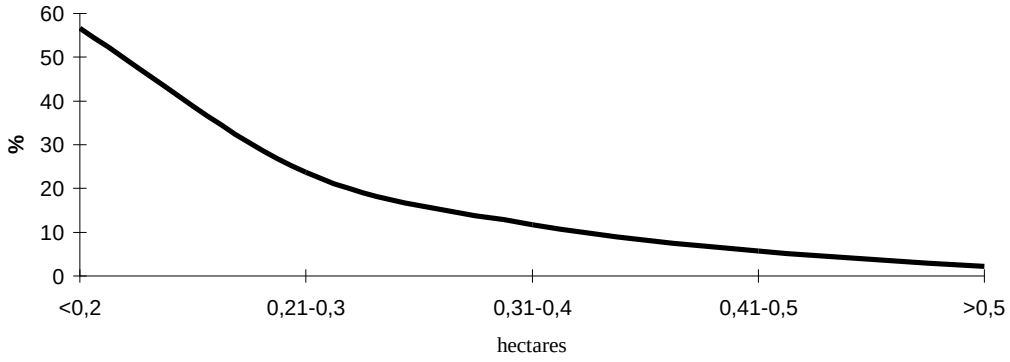
Figure 7. The share of money incomes from household farming in the total money incomes of rural families



Source: Data of the Goskomstat.

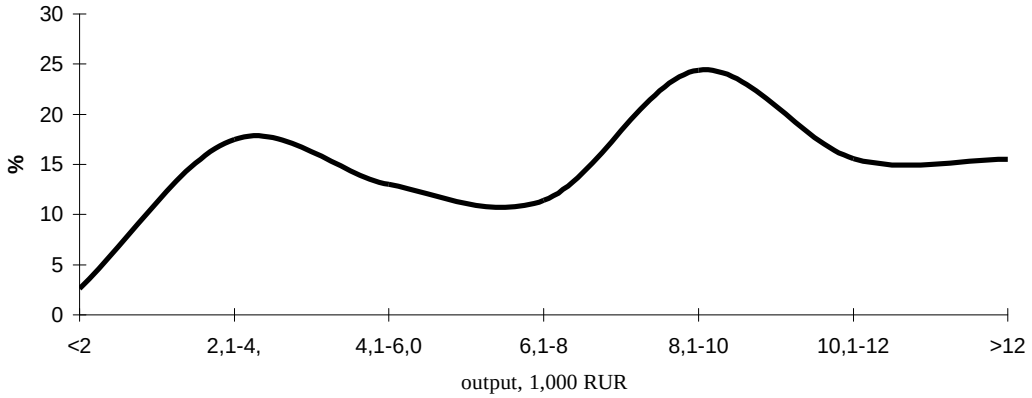
In May-June 1997, in one of the major agricultural regions of Russia - Rostov oblast - the survey of 329 rural households running their subsidiary plots was carried out. The results can illustrate the actual size and role of household production in Russia's agriculture (Figure 8&Figure 9).

Figure 8. Rostov region: Distribution of household plots by land area, 1997 (Survey of 329 households)



Source: A.Tarasov et al. Lichnoye podsobnoye khoziaystvo naselenia (Household agricultural production). Rostov/Don.1998. P.23.

Figure 9. Rostov region: Distribution of household plots by annual output, 1997 (Survey of 329 households)



Source: A.Tarasov et al. Lichnoye podsobnoye khoziaystvo naselenia (Household agricultural production). Rostov/Don.1998. P.22.

Households tend to develop livestock husbandry, and their wishes to increase the number of animals are not coupled with the intention to enlarge plots though there is a legal opportunity for that.

The surveys showed that household production is highly dependent on the mother large-scale farms and constitutes together with them some kind of symbiotic units. The degradation of some large-scale farms is accompanied by the degradation of associated household production as well, while viable farms are able to support the household production of their workers.

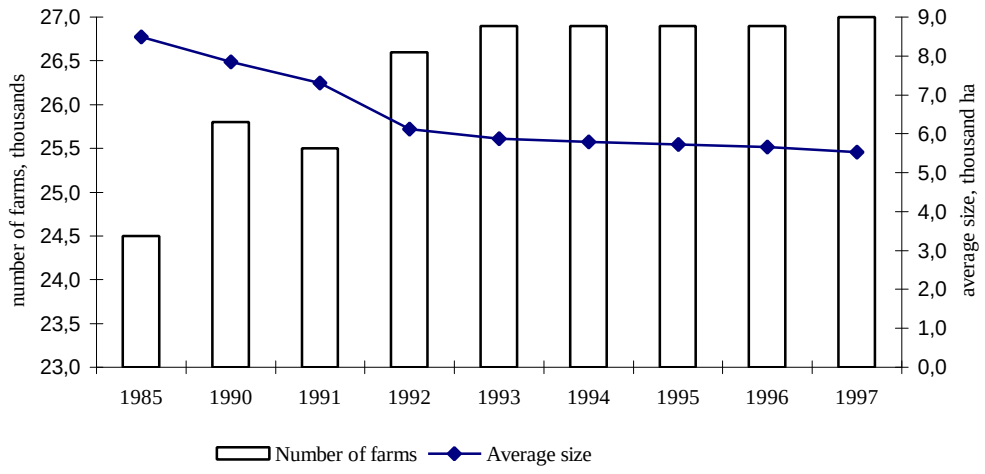
Further development of household production will be determined both by macroeconomic development and the evolution of large-scale farms. The growth in the economy coupled with the increase in real incomes of population, social stability and lower unemployment risks, etc. will lead to the lowering of the opportunity costs for subsidiary production in households. And the latter will tend to eliminate this type of activity. On the other hand, the evolution of former *kolkhoz*es and *sovkhoz*es towards real corporate farms with concentrated ownership will also reduce the scope of household agricultural production since new owners will tend to restrict the household production of hired workers. And only in marginal agricultural areas where household plots have become a way of survival for the rural population, the growing demand for agricultural products may foster the evolution of household production into individual private farms.

6. The large-scale farms' transformation

Although large-scale farms remain the major agricultural producers in Russia, the privatization and restructuring of *kolkhoz*es and *sovkhoz*es have influenced their performance, induced changes in size, legal status, economic behavior, and so on.

The diminishing of sizes of former *kolkhoz*es and *sovkhoz*es was the most obvious result of restructuring (Figure 10). This decrease in sizes was caused by two reasons: first, by the withdrawal of individual farmers from large-scale farms with their plots, and second, by the division of farms into two and more parts during the restructuring. Having in mind the irrationally huge farms in the Soviet economy, the process of decrease in sizes of large-scale farms should have a positive impact on agriculture: its maneuverability theoretically increases.

Figure 10. Number and average size of large-scale farms



Source: Data of the Goskomstat.

The number of annual average workers per farm has also decreased. The statistic mode of distribution of large-scale farms by number of workers is equal to 100-200 workers. At the same time only 6% of all employees of large-scale farms work in relatively small farms (up to 100 workers) while 50% of them are engaged in farms with more than 300 employees (Figure 11).

Figure 11. The distribution of large-scale farms by the number of workers (1996)

Source: Data of the Goskomstat.

The process of farm restructuring also led to the emergence of various new forms of legal entities in agriculture. The changes in legal status of large-scale farms during the reform years were determined by many factors; however, the joint stock companies of various types prevailed during all the reform years (Figure 12).

Figure 12. Number of large-scale farms of various legal forms (as of the end of the year)

Source: Data of the Goskomstat.

At the same time, in spite of a big variety of legal forms of large-scale farms and irrespective of the registered legal form, in the absolute majority of cases the re-organized farms are actually production cooperatives. Thus, in 1995, the total dividends paid by all large-scale

farms to their members amounted to 5.6% of the total wages; in 1997, this share fell down to only 1%[5].

Moreover, the real control over business in these production cooperatives usually belongs to a manager or to a group of top managers of a farm. Thus, up to 30% of marketed output is distributed to the workers (members of the cooperatives). This distribution can be made in the form of wages in kind, sales at reduced prices, collective consumption (e.g. in a farm canteen) at lower prices. The survey in three regions of Russia (IET and University of Kiel survey in 1995 and 1997) showed that the bulk of products distributed in such a way is later marketed by households. However, a profit maximizing enterprise tends to reduce its production + marketing costs. It is also unquestionable that the marketing of large volumes of products is less costly than the marketing of small lots. So, the division of output between workers *per se* enlarges the marketing costs of a collective enterprise as a whole. In other words, this strategy is irrational from the point of view of a cooperative. However, if we assume that the business belongs to the manager or a small group of top managers the described strategy turns out to be extremely rational: the manager cuts down his marketing costs shifting marketing towards employees. Since the workers do not protest against this widely spread practice, they agree with the concentration of control in the hands of managers.

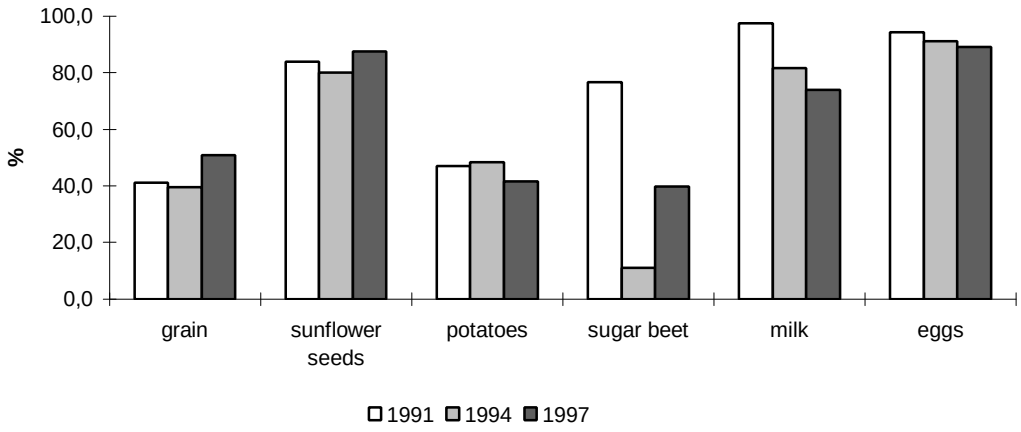
The actual form of large-scale farms will further evolve under the impact of market economy development. Already now observations show three principal ways of further transformation of these farms. The first way leads to the division of a large farm into several smaller production units, not necessarily family farms. The second way results in the creation of a commercial farm with clear ownership relations, using rented land and large volumes of hired labor. The third way of farms' transformation is typical for the depressed marginal regions: a former large-scale farm retains its legal status and exists only nominally, while its workers actually survive by running household production and using common facilities for services.

The abolition of the system of mandatory output deliveries to the state reserves coupled with the severe drop in production has changed to a

[5] Data of the Annual large-scale farms' reports of correspondent years.

certain extent the marketing strategy of large-scale farms (Figure 13). For such cash crops as grain and sunflower seeds the share of sales in the gross output has slightly increased as compared to the pre-reform period. On the contrary, the share of sugar beet sales has significantly dropped: farms prefer to market sugar which brings much higher revenues, and in order to get sugar they pay sugar refineries a part of processed sugar beet (so called *daval'chestvo*). Farms realized the advantages of marketing processed products. Thus, in 1997 7% of milk sales (in physical terms) consisted of on-farm processed dairy products, 41% of meat sales (in physical terms) consisted of on-farm processed meat products, 20% of crop sales (in money terms) consisted of processed crops. The potato production in large-scale farms has dropped so significantly that any changes in the marketed share are not important.

Figure 13. Share of marketed output in the gross output of large-scale farms*



* - sales of processed products are not included.

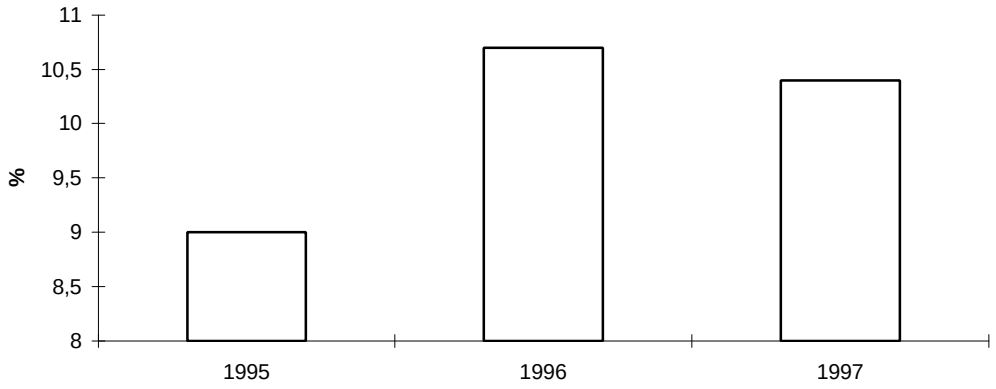
Source: Data of the Annual large-scale farms' reports of the correspondent years.

The share of loss-making large-scale farms has increased tremendously during the reform period (Figure 1). However, the official data does not reflect the actual situation: a great deal of revenues is in shadow, under-reporting is widely spread.

The share of state (federal and regional) subsidies in the gross revenues of large-scale farms is not significant - around 10% (Figure 14). It is notable that in 1995 the lowest level of subsidies was related to the lowest share of loss-making farms. However, it was due to the massive farm debts' writing-offs in 1994-1995, and the fact that this measure (reducing the number of insolvent farms) was not reflected in the

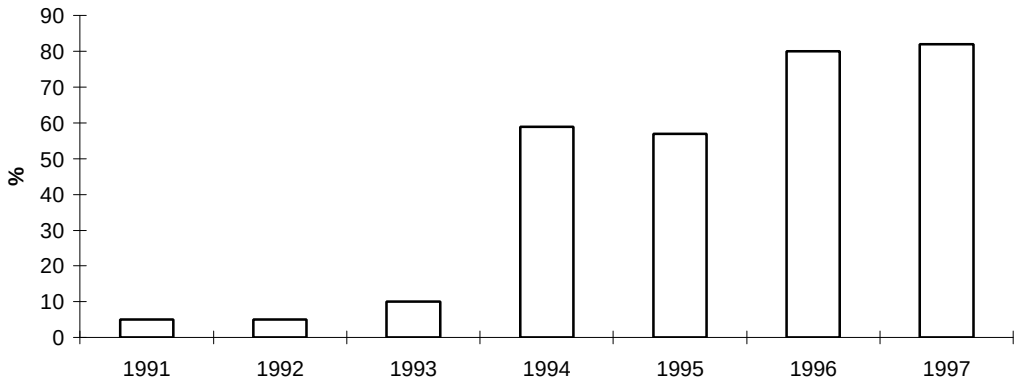
statistics of subsidies. In 1998, the subsidies to agriculture were severely reduced and the share of subsidies in the gross revenues of farms would be much less than 10%.

Figure 14. Share of state subsidies in the gross revenues of large-scale farms



Source: Data of Annual large-scale farms' reports of the correspondent years.

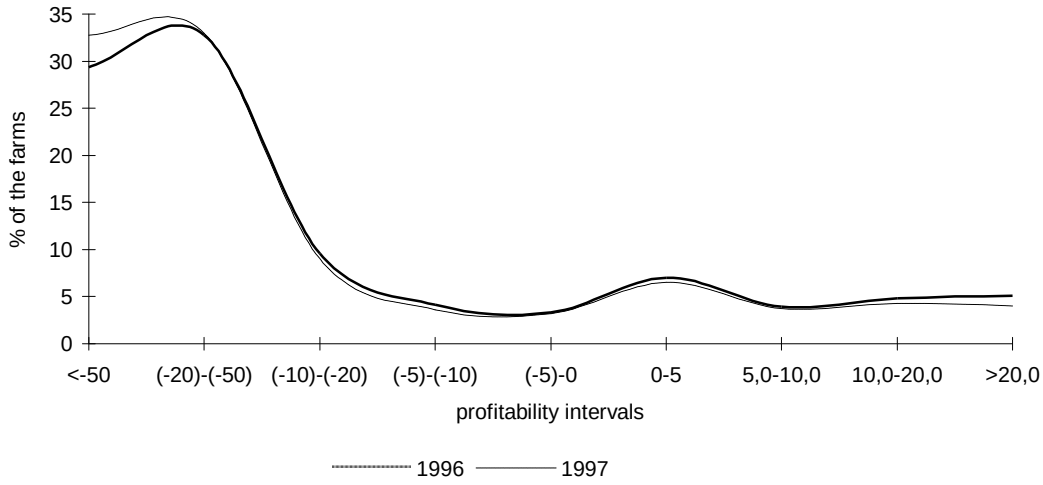
Figure 15. Share of loss-making farms in the total number of large-scale farms



Source: Data of the Annual large-scale farms' reports of the correspondent years.

The distribution of large-scale farms by profitability groups (Figure 16) shows that there is no polarization of farms: the concentration of farms on the left side of the chart is not accompanied by their concentration on the right side.

Figure 16. Distribution of large-scale farms by profitability



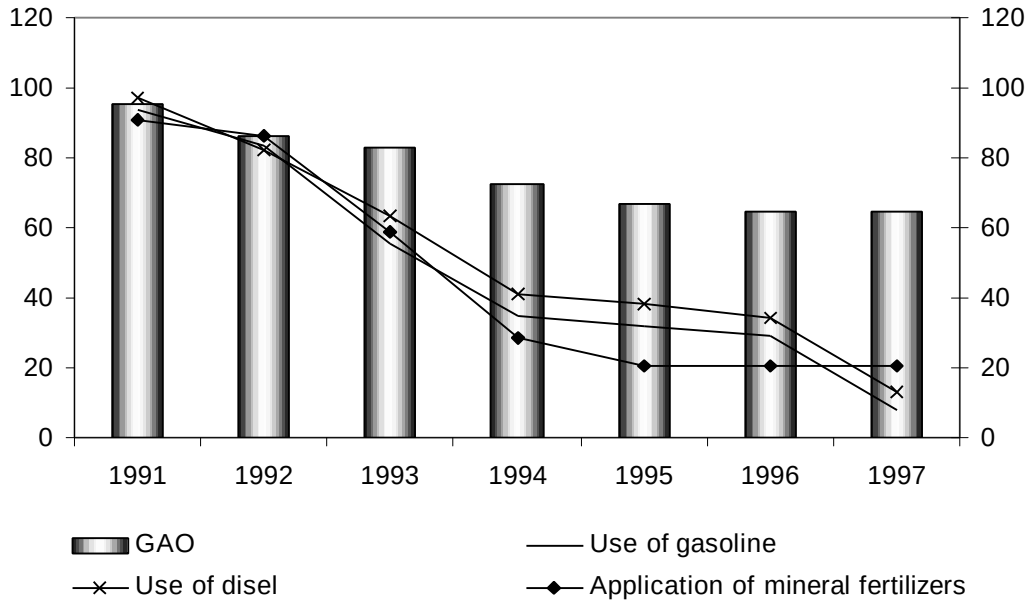
Source: Data of the Goskomstat.

In general poor economic and financial reporting does not allow to estimate the economic efficiency of large-scale farms and its changes in the process of reforming. However, it is clear that the absolute majority of large-scale farms are survival-oriented enterprises[6], primarily striving to increase the short-run cash inflows rather than the long-run assets value. A vague legal structure of the business determines as well the enterprise managers' strive to maximize personal revenues rather than the farms' cash inflows.

It is difficult to estimate the economic efficiency of large-scale farms, but the existing studies on technical efficiency show that it was falling and especially in the less advanced agricultural areas. However, the partial indicators of return per unit of inputs have improved during the reforms as a reaction to tightening budget constraints (Figure 17, Table. 12).

[6] B. Ickes, R. Ryterman (1994) From enterprise to Firm: Notes for the theory of Enterprise in Transition, in R.Campbell (ed.): The Postcommunist Economic Transformation: essays in Honor of Gregory Grossman, Westview press. Boulder, CO.

Figure 17. Indices of GAO and the use of selected inputs (1990=100%)



Source: Data of the Goskomstat.

Table 10. Gross agricultural output per unit of selected inputs

	1991	1992	1993	1994	1995	1996
sowing acreage, 1 000 RUR/hectare	0.84	0.77	0.75	0.71	0.67	0.64
labor, 1 000 RUR/person	10.05	8.74	8.36	7.21	6.90	6.48
tractors, 1 000 RUR/piece	72.76	68.45	68.06	64.61	65.05	64.14
harvesters, 1 000 000 RUR/piece	0.20	0.24	0.24	0.23	0.23	0.24
fertilizers, 1 000 RUR/ton	9.65	16.05	22.81	53.07	45.53	39.69
gasoline, 1 000 RUR/ton	9.20	9.39	13.61	20.08	20.70	21.90
diesel, 1 000 RUR/ton	5.02	5.35	6.61	9.46	9.61	10.24
electric power, 1 RUR/kwt-hour	1.38	1.26	1.22	1.21	1.29	1.30

Source: Goskomstat data, author's calculations.

D.Sedik, M.Trueblood and C.Arnade have estimated the total technical efficiency of the Russia's agriculture[7]. Applying two methods to measure the technical efficiency (data envelopment analysis and stochastic frontier analysis) they have estimated changes in the agriculture's

[7] D.Sedik, M.Trueblood and C.Arnade. Agricultural Enterprise Restructuring in Russia, 1991-95: Technical Efficiency Analysis. Paper presented at the conference "Russia's Food Economy: Towards Truly Functioning Markets". July 13-14, 1998 (publishing).

technical efficiency in Russian regions in 1991-1995. The major result they have got is that the average efficiency score of the Russia's agriculture has declined from 0.7 in 1991 to about 0.54 in 1995.

The picture by regions demonstrates that more efficient in the pre-reform period regions retain their performance level, while the efficiency of more marginal regions is deteriorating quite rapidly. This result is rather natural: after the economic liberalization the demand for agricultural output has fallen significantly and, therefore, less efficient regions have become more marginal. On the other hand, the price liberalization abolished the system of differentiated purchase prices in agriculture tightening the budget constraints in less efficient regions. The third reason in this respect is that under the break of cooperative links between Russian territories regions strive for self-sufficiency in major foodstuffs (especially in the first period of reforms, studied by American researchers). Thus, they tend to produce crops for which they have no adequate climatic conditions, skilled workers, etc.: e.g. sugar beets or grain. At last, the most efficient regions are able to cut the less efficient branches of agriculture such as livestock husbandry: in the Soviet time it was impossible due to the strict administrative control.

Some important findings were derived from the mentioned study, including those that were partially emphasized above. Thus, it was concluded that the greater portion of GAO is produced in a region's households, the less efficient its large-scale farms' production is. This phenomenon was explained above.

Another conclusion made is that the technical efficiency of farms heavily depends on the terms of trade. It largely corresponds with our general perception that the major factor of farms' adjustment is the macroeconomic development. The smoothing of the price disparity problem after 1995 has led to a certain growth in the partial indicators of farms' efficiency (in the period after the one examined in the mentioned study of D.Sedik *et all*).

Another finding is that the technical efficiency depends on the size of farms: larger farms tend to be less efficient.

The major conclusion of the analysis of technical efficiency of large-scale farms is that the farm restructuring did not lead to the growth in general efficiency. However, in the most advanced agricultural areas farms have adjusted better as they managed to minimize losses in efficiency. The tightening of budget constraints led to a better utilization of purchased inputs.

The Nizhny Novgorod model of farm restructuring presents the most profound transformation of the farms. It is already quite spread in the country. However, the latest examples of its application are less characterized by the division of large-scale farms into smaller production units and have resulted just in the transformation of a legal form of agricultural enterprises. Besides, studies showed that this model does not lead to the significant growth in the viability of farms: their restructuring without relevant macroeconomic development can not result in the growth of the sector's efficiency.

7. The emergence of land market

Land market is just emerging in Russia and nowadays it embraces less than 0.5% of lands permitted for transactions; besides, 1.4% of lands is being leased. But the absolute majority of transactions is carried out in the township, while farmlands are poorly engaged in the open turnover. Given the falling agricultural production, the demand for land is insignificant, and though the federal land legislation is quite liberal the land market development is very much delayed.

Table 11. Land transactions, 1996-1997

	1996		1997	
	Number of deals	Hectares in deals	Number of deals	Hectares in deals
Sales by local authorities	43 907	8 990	20 897	7 029
Sales-purchases	218 759	33 621.6	265 689	59 324
Gifts	34 094	8 270.3	33 581	6 095
Successions	132 171	128 447.7	158 512	49 423
Mortgage	760	2 982.1	2 983	3 016

Source: The State Report on Land Status and Use in the Russian Federation. Moscow, 1997. P. 52; Data of the Land Committee.

Table 12. Farmland transactions carried out by local authorities for large-scale and individual farms

	1995		1996		1997	
	Number of deals	Area, 1000 ha	Number of deals	Area, 1000 ha	Number of deals	Area, 1000 ha
Sales	173	6.7	522	1.4	206	2.6
Tenancy	210 036	13 053	77 111	14 374	60 365	17 777

Source: Data of the Land Committee.

Table 12 shows that the demand for farm lands is not significant and even falls from year to year. This can also be illustrated by the growth in the rayon land reserves (Table 13).

Table 13. Rayon land reserves

Date	1000 hectares
01.02.1992	9 490
01.03.1993	6 636
01.03.1994	13 095
01.01.1995	13 758
01.01.1996	14 621

Source: Data of the Agrarian Institute.

Nevertheless, the farms' restructuring concept based on lands' sharing entailed the emergence of a para-market of land-shares. The latter creates a certain mechanism of concentrating land in the hands of more efficient operators.

However, due to the political instability, budget constraints, non-transparency of legislation, the Decree on registering the right to use land shares is implemented only by 40% (as of April, 1998): it means that only around 40% of the 12 million shareholders have registered contracts on disposal of their lands. Among this 40%, 38% of shares were rented out, around 1% - deposited to the equities of agricultural enterprises, 0.2% of shares were used for enlarging household plots. More than 3% of shareholders passed the right to use their shares to legal entities.

In 9 regions of Russia over 90% of land shareholders have registered contracts on the disposal of their shares, in 9 regions - just 10%.

As it was indicated, rent contracts are most spread among share transactions: in 18 regions they are concluded for more than 50% of all shares (these are mostly major agricultural regions).

Besides, it is necessary to note that in 16 regions of Russia land sharing has not been implemented at all (the North Caucasian republics, Sakha, Tyva and some autonomous areas).

8. Russia's experience in comparison with other transitional economies

Although the Russian agrarian reform concept differs from those in other transitional countries, from the point of view of farm structure Russia follows the examples of other industrial economies in transition (Czech, Slovak republics, Estonia). However, farm restructuring is not the only task that the transition in agri-food sector should solve. For efficient functioning of the sector markets are be developed, new institutions (in particular credit system) are to be established. From this point of view Russia's agri-food sector lags far behind the majority of CEECs and even some of the NIS. In accordance with the World Bank's ranking of the countries in transition as to their success in agrarian reforms, Russia is in the middle of the list between Rumania and Kyrgyzia.

9. Conclusions and outlook

Thus, Russia is slowly moving along the way of agrarian reform and in principle it follows the main stream of other countries in transition. The policy of farm restructuring and land privatization has led to the new structure of farming, new economic behavior of farms and even to some signs of land turnover emerging in agriculture.

However, the process is hindered by many factors, the major of which are:

- macroeconomic instability aggravated by the recent crisis;
- lack of consensus in the society regarding the concept of agrarian reform;
- lagging behind in markets' development and institutional reforms;
- quality of rural population;
- scope of the country.

The large-scale farms remain the major agricultural producers in Russia. Although in the majority of cases these farms have a form of production cooperatives, they are evolving into a corporate type of farms.

The household production is the second biggest sector of farming. This production is highly dependent on the mother large-scale farms and plays

a subsidiary role. The economic stability and deep large-scale farms' restructuring lead to the decrease in this type of agricultural production.

Individual farmers have played a catalyst role in the Russian agriculture and even demonstrated a certain period of rush growth, but by now it is a rather marginal sector of farming.

Further development of the farm structure will go in the direction of evolution of large-scale farms which will dominate in the Russia's agriculture in the nearest decades (in Russia in general though in some regions it can be different).

The emerging of market environment in the agri-food sector will be impacted by the recent crisis, which will have dual effect. On the one hand, the financial, social and political instability will greatly depress the sector: the shrinking purchasing power of population, the collapse of credit system, the reviving of criminal elements on the food markets in metropolitan areas, etc. But on the other hand, the devaluation of ruble has created a window of opportunities for domestic agri-food producers protecting them from imports. However, the balance of these positive and negative influences will highly depend on the policy at the federal and regional levels.

Most likely that given the lack of clear concept of the sector's transformation, the mentioned chance for the growth of internal competitiveness of agri-food producers will not be utilized. In this case the state of the Russia's farming sector will remain deeply depressed in the long-run perspective and all the minor achievements of the recent reform years will be wasted.

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Privatization of Land and Farm Restructuring: Ideas, Mechanisms, Results, Problems

Uzun V.Ya.[*]

One of the most important goals of farm restructuring in Russia was the creation of efficient competitive agricultural production based on the private ownership for land and other means of production as well as on the initiative and entrepreneurial activity of agricultural producers. To achieve the above purpose it was necessary to solve two important tasks: to privatize land and to restructure collective and state farms. The present paper is devoted to the privatization and reorganization practice, as well as to the results achieved.

1. Privatization of agricultural land

A heated discussion preceded the privatization of land. The main issues were: to whose ownership should the land be transferred and should it be paid for or free?

Four variants of the land transfer were discussed:

- restitution of land to former owners;
- distribution of land between families, living in the country at the moment of reform (proportionately to the number of workers or consumers);
- granting of land shares to peasants together with the right to dispose of them;
- transfer of land to the ownership of agricultural enterprises.

The *first variant* of privatization was employed in the countries of Eastern Europe (Czech and Slovak Republics, Hungary, Bulgaria, Rumania, East Germany) and former Baltic republics (Estonia, Latvia, Lithuania). In Russia this variant was rejected due to the political reasons and practical impossibility (it was not possible to find old titles to land).

The *second variant* was employed in Albania, Armenia, China, Vietnam. In Russia it was rejected, because it inevitably entailed the dismantle of collective and state farms. Most rural residents were not ready for that. Besides, there was a danger that such a dismantle will destroy the agricultural service infrastructure (workshops, garages, fuel stations, threshing-floors, livestock premises, social infrastructure, etc.) created during decades.

[*] All-Russia Institute of Agrarian Problems and Informatics (Moscow), Econ.D.

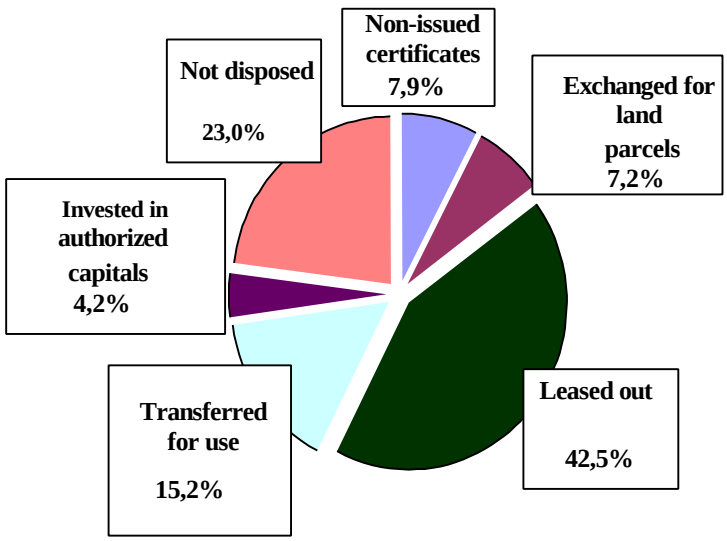
The *third variant* envisaged the division of land into conditional land shares of members of collective and state farms. This variant was chosen in Russia. It enabled anyone to exchange his land share for a land parcel or to rent the share to an agricultural enterprise, individual farmer or household. A land plot belonging to lessors of one farm may remain in the joint share ownership not subject to the division in kind.

The *fourth variant* provided for the transfer of agricultural land to the ownership of agricultural enterprises as legal entities, but not to individuals. Many politicians later insisted on the above interpretation of the Land Reform Law of 1990. In 1992 – 1993 state titles to land were issued to agricultural enterprises, however they had lists of individuals – land co-owners enclosed to them. This variant of privatization was also employed in Ukraine, Moldavia and other CIS countries except Armenia.

The long-lasting debates on whether the land transferred is to be paid for or free of charge ended by a compromise: a part of land (within the limits set for each group of land users) was transferred free, and the rest was to be paid for.

As a result of privatization, 11,8 million Russian peasants received the right for land share. The major part of them (as of January 1, 1999 – 10,8 million – 92,1%) received land share certificates. Most land share owners disposed of them in the following ways (Figure 1):

Figure 1. Disposal of land shares by their owners (%)



- 848 thousand owners (7,2%) exchanged land shares for land parcels to be used for individual private and household farming;
- 5016 thousand owners (42,5%) leased their land shares out;

- 1792 thousand owners (15,2%) transferred the right to use their land shares to the authorized capitals of agricultural enterprises. However, the transfer of only 402 thousand land shares (3,4%) is documented in the charters of agricultural enterprises;
- 503 thousand owners (4,2%) invested their land shares in authorized capitals. And only 112 thousand of them (1%) documented such a transfer and thus lost their land property rights.

Thus, 69,1% of owners disposed of their land shares in some way, and 54,1% of them went through the legal formalities. The lease out of land shares was most popular. In some regions the major part of owners signed land share lease agreements: in Saratov oblast and Stavropol krai – 88,6%, in Samara oblast – 83,5%, in Rostov oblast – 80,8%, in Belgorod oblast – 77,7%, in Tiumen oblast – 75,2%, in Ulyanovsk oblast – 74,7%, in Novosibirsk oblast – 72,8%, in Chelyabinsk oblast – 72,8%.

The rent differs significantly depending on the region. In the Southern regions it varies from 5 to 10% of the harvested crop, while in the Northern regions it often falls down to the amount of land tax.

But the process of privatization of agricultural land in Russia is still far from being complete:

- out of 220,6 million hectares of agricultural land in Russia (as of January 1, 1998), 138,1 (62,6%) are privately owned, including 116,2 million hectares owned by land share owners, 11,7 million hectares owned by individual private farms and 10,2 million hectares owned by households;
- in 15 constituent members of the Russian Federation the privatization of land did not even start (Daghestan, Bashkiria, North Caucasian Republics, etc.), in some regions it started but was actually suspended (Mari El, Karelia, etc);
- land property certificates have not been issued to approximately 1 million land share owners. A large part of certificates, registered as issued to individuals, actually lies in safes of agricultural enterprises' administrators;
- agreements have been signed on the lease-out and transfer to authorized capitals of only 56,1 million hectares of agricultural land which is 48,3% of the land shares owned. The rest of land owned by individuals is used by agricultural enterprises without proper legal formalities.

To complete the land privatization process it is rational:

- to issue land share certificates to the owners, who have not yet received them;
- to examine in the RF Constitutional Court the lawfulness of actions of the RF constituent members' authorities, that have deprived citizens of their land share rights; in case of a positive judgement of the RF Constitutional Court to draw up the lists and to issue land share certificates in the named constituent members of the Russian Federation;
- to conclude rent or other agreements with all the owners of land shares;
- to regard the use of land without concluding a proper agreement with the owner as a grab. All administrators of agricultural enterprises are to draw up the lists of individuals, with whom they do not want to conclude land agreements, and to submit them to the district authorities. Land parcels equivalent to the land shares rejected by an agricultural enterprise are to be separated from the latter's land and to be used according to the way to be chosen, for instance: to allot land parcels to owners who filed the respective applications, to sell land shares to the state and to transfer land into the district special reallocation reserve, to lease land parcels out to other users, to return land shares to the state, if owners decline them;
- to set the rent for state lands at the market rate.

2. Privatization of property and restructuring of large-scale farms

The privatization of large-scale farms' property was conducted by dividing its value (minus debts) into property shares. Entities of social infrastructure, such as schools, hospitals, clubs, etc. were not included into the property being privatized. The size of a property share of each worker or pensioner depended on the length of his work in the enterprise and salary.

The share owners had several choices: to exchange their share for property needed for establishing an individual private farm, to exchange share for money, to sell, to grant, to bequeath, to invest their share in the authorized capital of enterprises, created in the process of collective and state farms' reorganization. The exception was made only for large-scale state livestock complexes, greenhouses and poultry farms the construction of which was financed by state investments. In such

enterprises individual property shares were appraised after excluding the state share, i.e. the value of production assets, created on the basis of budget and centralized investments within 15 years preceding the privatization, from the share fund. The state share was transmitted to the regional property fund, which could sell it to individual private farms or to agricultural enterprises created in the process of restructuring, with payment to be done by installments within the 3-year period.

As a result of privatization, the property was actually transferred to agricultural enterprises, but not to citizens (with the exception of property, acquired by individual private farmers in exchange for their shares). Former members of collective and state farms became the owners of shares, while agricultural enterprises as legal entities became the virtual owners of property.

The Russian program of land and property privatization was obviously based on the principle of social equity rather than economic efficiency. Thus, pensioners received land and property shares, though they were apparently unable to cultivate the land. According to the same principle, land shares were granted to the workers of social infrastructure entities, located on the territory of agricultural enterprises.

The ideology of farm restructuring was based on the supposition that rural residents, having received land and property titles, would use the rights granted, quit collective and state farms and establish individual private farms. But it never came true. Only 5% of workers quitted collective and state farms and established individual private farms. The rest of them did not venture to farm independently and preferred to transfer their land and property shares to agricultural enterprises.

The privatization of land and property required urgent reorganization of collective and state farms, the establishment of new agricultural enterprises instead of them that would be based on private ownership of land and assets. In the period of 1992 – 1993 most collective and state farms were reorganized into limited liability partnerships and joint sock companies. Some of them preserved the status of collective and state farms.

However, the reorganization of collective and state farms was virtually nominal. During the period of restructuring not only their ordinary members, but even administrators and specialists were no duly informed of the rights of owners, organizational forms of private farms, ways of transforming state enterprises into private ones.

In 1993 a mechanism of farm restructuring based on the Russian legislation was worked out and tested in Nizhny Novgorod region (Nizhny Novgorod model). However, this model didn't become widely spread.

There is a lot of objective reasons, preventing the employment of Nizhny Novgorod model. The main of them are:

- *shortage of initiative leaders.* The most entrepreneurial peasants left (or were driven out of) Russian villages for decades, while those who rested got accustomed to work for hire, to fulfill a specific kind of work (to milk cows, to drive tractors, cars, etc.). The Nizhny Novgorod model is oriented to the initiative rural entrepreneurs, ready to establish individual private farms and agricultural enterprises, able to operate machinery and equipment, to manage production, to conduct the accounting, to assess the efficiency of decisions made. Such people are few in Russian villages and this hinders the spreading of the above model;
- *price disparity.* As a result of price liberalization, the parity between agriculture and industry was distorted, input prices increased almost 5 times faster than the prices for agricultural products. Agriculture became unprofitable or low profitable. Very few people venture to start their business under these circumstances. It is also difficult to find people wishing to participate in farm restructuring, since most agricultural enterprises have tremendous debts, passing to their legal successors in case of restructuring;
- *confrontation of executive and legislative authorities.* The federal executive authorities approved and recommended the spread of Nizhny Novgorod model. The authorities of 15 regions of the Russian Federation did the same. The federal and some regional legislative authorities did not support the above model, which has undoubtedly affected the process of virtual restructuring of agricultural enterprises.

The results of farm restructuring were the following. At the beginning of 1998 there were 26987 agricultural enterprises in Russia. Among them there are enterprises of Soviet type (collective and state farms), as well as enterprises established under the Law on enterprises and entrepreneurial activity of 1991 (limited liability partnerships, mixed partnerships), enterprises complying with the Civil Code of the Russian Federation and basing on it laws on different types of commercial organizations, and, finally, agricultural enterprises not complying with any former or effective laws (collective, collective-share agricultural enterprises). Thus,

all agricultural enterprises in Russia can be with certain caution divided into the following groups (using definitions of the Civil Code of the Russian Federation): 5374 joint-stock companies, including 427 open joint-stock companies, 6658 limited liability partnerships, 189 partnerships on trust, 11590 agricultural cooperatives, 3176 state unitary and municipal enterprises.

During recent years a rather intensive process of bringing agricultural enterprises' constituent documents in compliance with the Civil Code has been underway. Many partnerships with limited liability and closed joint stock companies are being reorganized into production cooperatives, since according to the new Laws on limited liability partnerships and joint stock companies the number of members (shareholders) is limited (not more than 50 persons). During 1997 the number of production cooperatives increased by 600, in 1998 - by 2 thousand.

3.Large-scale farms: polarization of efficiency and ways to the future

In 1990 25,8 thousand collective and state farms using 202,4 million hectares of agricultural land and 8,3 million average annual workers produced 76% of gross agricultural output (GAO) in Russia. By 1998 the number of large-scale and medium agricultural enterprises slightly increased (up to 27 thousand), the area of agricultural land used by all agricultural enterprises dropped to 165,8 million hectares (by 18%), the number of workers almost halved and the share in GAO in current prices according to preliminary estimates decreased down to 45%[1].

Some part of large-scale farms adjusted to business environment, gained its own place in the market and is farming efficiently. The other part lost its markets, curtailed the production volumes and the number of workers.

The grouping of agricultural enterprises of the Moscow oblast by an aggregate index of financial performance[2] in 1995-1998 showed that two

[1] Beginning from 1997 the RF State Statistical Agency separates a group of large and medium agricultural enterprises. There are about 27 thousand of them using 149,2 million hectares of agricultural land. Besides, there are small agricultural enterprises with the number of employees less than 60, which use 16,6 million hectares of agricultural land (derived from "Russian Agriculture". Moscow, Goskomstat, 1998, pp. 50, 82).

[2] The grouping was done according to the methodology of I.V.Palatkin. 11 indices were calculated for each farm: 1) the share of profits (losses) in the balance structure; 2) the sufficiency of money assets to meet liabilities; 3) the fourth balance proportion (permanent liabilities minus losses exceed assets with low liquidity); 4) the sufficiency of working capital; 5) the sufficiency of own current capital; 6) the sufficiency of current assets; 7) production performance; 8) assets' profitability; 9) sales' profitability; 10) assets transformation efficiency;

groups were expanding in recent years: the first one, including financially prosperous and solvent enterprises and the last one, consisting of agricultural enterprises with financial and economic systems completely destroyed.

The examination of the first and the last group's performance within the last 4 years (Table 1)[3] allows to make some important conclusions:

Table 1. The use of resources in successful and failed agricultural enterprises of the Moscow oblast

	Prosperity (I group)			*Financial collapse (V group)*		
	1995	*1998*	*1998 as % of 1995*	*1995*	*1998*	*1998 as % of 1995*
1. Number of farms	56	56	100	81	81	100
2. Share in returns from marketing (%)	22	27	125	15	11	72
per one farm						
3. Number of workers	438	391	89	384	204	53
4. Agricultural land area, ha	3502	3499	100	2920	2840	97
5. Planted area, ha	2762	2764	100	2034	1517	75
6. Number of cows	940	896	95	652	366	56
per one worker						
7. Fixed assets, thous. roubles	99	205	207	108	372	344
8. Gross income, thous. roubles	14	21,8	156	3,9	-10,9	-
9. Indebtedness, thous. roubles	2.5	0.9	36	7.5	26.2	349

11) production and commercial cycles of an enterprise. The aggregate index of financial performance was calculated by weighing the above indices. The grouping of agricultural enterprises was done on the basis of the aggregate index. 5 groups were defined: financially prosperous, financially unstable, insolvent, bankrupt, enterprises with total collapse of financial and economic system.

[3] The 1998 data was used for grouping enterprises in Table 1. The same enterprises were selected in the 1995-1998 period. If some enterprise was not present in the data base for at least one year, it was excluded from the analysis. Thus a compatible list of enterprises within the 4-year period was drawn up.

- *the share in returns from marketing* of prosperous farms increased, while of the failed ones - dropped;
- *workers* being the most active part of production forces leave failed farms (almost one half of workers left them within 4 years). It's not surprising since wages there are miserable and arrears are common. Usually such farms are quitted by the most skilled young workers (specialists, machine-operators, drivers) that are able to find job outside and venture to change their residence. The least skilled old workers, unable to find job outside and not willing to change their residence rest in failed farms.

  The number of workers is decreasing as well in prosperous farms. But here the decrease is caused by the growing labor productivity, retirement of old workers or dismissal of the least skilled and disciplined ones;
- *the agricultural land area* in successful farms doesn't change while in the failed ones 3% of agricultural land has been transferred to other users. As a rule, such a transfer is done through the exchange of owners' land shares for land parcels and the latter's lease out to successful individual private farms or agricultural enterprises;

  However, failed farms cannot efficiently use their land. Their planted area within 4 years decreased by 25%. Livestock number almost halved, i.e. hay meadows and pastures could not be used in full. It's a typical picture, when idle for many years pastures and hay meadows are overgrown with bushes and trees.

  In prosperous farms planted areas didn't shrink and the number of cows declined only by 5%;
- both prosperous and failed farms retained their *fixed agricultural assets*. But due to the sharp drop in the number of workers in failed farms, the value of fixed assets per one worker in them grew and notably exceeded that of prosperous farms. However, the remaining employees are unable to efficiently use these assets. Depreciation amounts are bigger than the returns from marketing. Moreover, the remaining workers are not even capable to guard the property. As soon as no livestock is left in a farm building, it stops to be guarded and in most cases is gradually pilfered;
- within the period studied *economic efficiency* of prosperous farms increased - their gross income grew while debts shrank. In failed farms the results were actually catastrophic: their gross income became

negative, i.e. farms survived by spending formerly accumulated capital, and their indebtedness per one worker increased 3,5 times.

Table 2 presents the grouping of agricultural enterprises by their financial performance in Russia as a whole[4].

As can be seen from Table 2, trends observed in all Russian agricultural enterprises are similar to those in the Moscow oblast, although due to a shorter period of analysis and less definite grouping criteria these trends are less apparent.

Table 2. The use of resources by successful and failed agricultural enterprises in Russia*

	Prosperity (I group)			*Financial collapse (V group)*		
	1995	*1998*	*1998 as % of 1995*	*1995*	*1998*	*1998 as % of 1995*
1. Number of farms	6615	6615	100	6749	6749	100
2. Share in returns (%)	40	45	112	19	14	74
per one farm						
3. Number of workers	285	262	92	229	176	77
4. Agricultural land area, ha	6064	6009	99	6181	5848	95
5. Planted area, ha	3565	3481	98	3086	2610	85
6. Number of cows	429	377	88	366	230	63
Per one worker						
7. Fixed assets, thous. Roubles	71	180	253	78	232	299
8. Gross income, thous. roubles	6.7	7.6	113	1.1	-9.8	-
9. Indebtedness, thous. roubles	7.1	7.5	106	6.2	29.8	481

[4] Since the federal agricultural data base lacked all the necessary data for calculating the index of financial performance, in this case the grouping was done by an index that can be called "an estimated period for repaying debts (the ratio of difference between debts to be paid and to be collected to the amount of gross income and depreciation). Farms were divided in 5 groups. The group of prosperous farms included farms capable to repay debts within 1 year or sooner; the group of financially unstable farms - within 2 years; the group of insolvent farms - within 5 years; the group of bankrupt farms - within 20 years; the group of farms with total collapse of economic and financial system will never be able to repay debts or will need for it 20 and more years.

∗ The grouping included only those enterprises that were present in the data base for all the 3 years.

The differentiation of agricultural enterprises, that has occurred in Russia, made the problem of transferring land and property from inefficient, insolvent farms to the efficient ones quite urgent. The main ways for the above transfer, worked out in the process of elaborating the program of land privatization and farm restructuring in 18 regions of Russia (647 farms), are the following:

- as to the state lands – the revision of decisions to lease out or transfer lands, the withdrawal of land from insolvent farms and its transfer to the solvent ones;
- as to the private lands – solvent farms apply directly to the owners of land shares in insolvent farms and lease (rarely – buy) the land plots currently not in use;
- the property of insolvent farms can be transferred to efficient users on the basis of rent agreements between farms, attachment and sale of property by law enforcement officers, the outflow of shareholders from insolvent farms to the solvent ones and the respective transfer of their share property, the bankruptcy of inefficient farms and the sale of their property as a whole or in parts to efficient farms, the transfer of land and property of inefficient farms to personal households.

Each of the named methods has its positive and negative sides, that should be taken into account when choosing the method of land and property transfer.

In successful agricultural enterprises as well as in the enterprises of other groups except the last, a trend is obvious to concentrate the capital and management in the hands of a rather narrow group of the most active and responsible members. With this purpose:

- partnerships on trust are being established, in which a small group of members (usually 3 – 8 persons) undertakes the full responsibility for the farm, while others are invited as investors without the right of vote;
- agricultural production cooperatives with few members having the right of vote are being founded. Other members are invited as associated ones;
- in joint-stock companies and limited liability partnerships shares are being concentrated in the hands of small groups of people through the purchase of shares, the sale of shares to the amount of dividends, etc.

4. The sector of family farms

Family farms in Russia are represented by individual private farms and household farms.

At the beginning of 1999 there were 270,2 thousand individual private farms in Russia. The medium size of such a farm is 51 hectares, the average number of workers – 3,2 persons. New individual private farms are being established, some of the existing ones are expanding their activity. At the same time the opposite processes are underway: liquidation of individual private farms, transfer of their lands to other farmers and collective enterprises or their return to the state. A general tendency of the recent years is the drop in number of individual private farms and the increase of their land areas (Table 3).

Table 3. The number and land area of individual private farms in Russia (as of January 1)

	1996	1997	1998	1999
Number of individual private farms, thousand	280,1	278,6	274,3	270,2
Total land area, million ha	12,0	12,2	13,0	13,8
Land area per one farm, ha	43	44	48	51
including agricultural land, ha	40	41	44	48
including arable land, ha	29	30	33	36

A part of liquidated individual private farms is transformed into household farms. It helps them to evade taxes. Some farms, although registered as individual private ones, actually do not differ from household farms. At the same time another part of private farms increased the production volumes and turnover by leasing additional land areas from land share owners, diversifying their activity through the development of processing of agricultural product and especially through trade. These farms are not inferior to large agricultural enterprises in the scale of operations and efficiency.

Household farms, the number of which in Russia is about 16 million, as of January 1, 1998 possessed 10,7 million hectares of land. The medium size of a household plot was 0,36 hectares, of a parcel in horticulture and gardening partnerships - 0,08 hectares.

However, the actual agricultural land area used for household farming is much bigger. Households also use agricultural land granted to them in the form of "field allotments" and the land being under authority of rural administrations. The agricultural land area of household plots, orchards and gardens was 10,2 million hectares while the total agricultural land area used by population amounted to about 28 million hectares, i.e. it included over 17 million hectares of rural administrations' lands. Only a small part of them is arable land while the major part - hay meadows and pasture. Taking into account the lands of rural administrations, the medium size of a household plot in Russia as of January 1, 1998 was 1,7 hectares. It varied greatly in different regions of the Russian Federation.

In fact two thirds of household farms use mainly household plots. Given that the medium size of about 5 million most actively operating household farms, using field allotments and lands of rural administrations is nearly 5 hectares. Besides, household farms often use lands of agricultural enterprises allotted by the latter to their workers in the form of additional field parcels. It should be also mentioned that a large part of output of agricultural enterprises, especially feeds, is transferred to workers as a payment for their labor or as a rent for land shares. These in-kind returns are used by household farms for producing meat and milk.

In 1996 households produced 47,4% of GAO in Russia. In 1997 this share increased slightly– up to 47,9%[5]. It was a reassuring fact. It inspired a hope that large-scale production stopped its retreat before the small-scale and that at last large agricultural enterprises and individual private farms will start to win the agricultural market over from small producers. But in 1998 the above trend reversed and the share of households exceeded 50% of GAO.

Since 1996 the RF State Statistical Agency calculates the gross value added in agriculture, which as different from the GAO doesn't not include double accounting (in gross output feeds, seeds, etc. are included twice). In 1996 it amounted to 148,3 trillion roubles, including households – 96,7 trillion (65,2%), large-scale farms – 48,2 trillion (32,5%), individual private farms – 3,4 trillion roubles (2,3%)[6]. In 1997 the share of households in the value added further grew - up to 66,6%, while the share of large-scale farms dropped down to 30,4% (Table 4). According to these

[5] Output, intermediate consumption and gross value added in agriculture in 1997 (in current prices). Moscow, Goskomstat, 1998, p.6.

[6] Non-denominated rubles.

figures, the leadership of household farms in agricultural production is obvious.

Table 4. Gross value added in agriculture (current prices, denominated roubles)

	1996		1997	
	billion roubles	%	billion roubles	%
Large-scale farms	48,2	32,5	5,3	30,4
Household plots	96,7	65,2	110,4	66,6
Individual private farms	3,4	2,3	5,0	3,0
Total	148,3	100	165,7	100

In different constituent members of the Russian Federation the proportion between households and large-scale farms varies greatly. There are regions where value added by households exceeds that of large-scale farms 5 – 10 times (Smolensk, Pskov, Amur oblasts, Khabarovsky kraj, North Caucasian Republics).

At the beginning of agrarian reform in Russia two versions of its further development existed. Some people believed that, having received the right of land ownership, peasants would establish millions of individual private farms and become the main producers of agricultural output. Others, on the contrary, asserted, that large-scale farms, released from the state intervention in their activity, would increase their efficiency in the market environment and supplant small producers in agricultural markets.

None of the above versions came true. In reality during the period of reforms the role of households in agricultural production was growing fast, while the role of large-scale farms was falling down. The transformation of Russian agriculture into a "farmers'" one occurred, although due not to the growth of officially registered individual private farming, but to the development of household farming.

The main producers of agricultural output in Russia are, on the one hand, large-scale farms, tens and hundreds times exceeding the size of farms in developed countries by their land area and number of workers and, on the other hand, small households, which are hundreds times smaller than typical farms in developed countries.

There are two opposite tendencies in the modern agriculture of Russia. Personal interests of householders lead to the strengthening of family farms

as the main source of food and income of rural families. The interests of rural entrepreneurs and the most part of large-scale farms' workers, wishing to keep their narrow-skill occupation, explain the preservation of large-scale agricultural enterprises.

The agrarian reform in Russia increased the role of family farms while diminishing the role of large-scale farms. The share of family farms in the production of GAO, meat, milk, wool almost doubled. In the US, on the contrary, the role of individual and family farms during the last decades decreased, while the role of corporate farms grew. The evidence of that is the growth of corporate farms' share in the returns from marketing agricultural commodities, agricultural land area, fixed assets, expenditures on hired labor.

Large-scale private farms are being established on the basis of former collective and state farms. However, the number of shareholders in such farms is still very large, and their economic performance is poor. In the USA corporate farms are usually inter-family farms. As a rule they have less than 10 shareholders (partners). Corporations with more than 10 members account for only 0,7% of agricultural land area, 1,5% of fixed assets, 4,9% of returns from marketing and 7,3% of expenditures for hired labor.

Family Farms and Shadow Economy of the Russian Agrarian Sector

Praust R.E.[*]

The fact that different types of family farms (formerly referred to as "population's farms") are the numerically predominant forms of land economy is well known. It's sufficient to say that as of January 1, 1999, 44,6 million families owned household plots and individual private farms, as well as land parcels in collective orchards and gardens.

According to different estimates, in the 90's the sector of family farms produced from 32 to 54% of gross agricultural product (GAO). This fact confirms the globality of the observed trend.

Such a high share of family farms in agricultural production on the territory of a gigantic country, having very different natural, social and economic conditions can be provided only in case, when this form of farming constantly reproduces itself on its own resource and technical basis and for a wide part of population is either the main or the only available alternative method of subsistence production.

The above facts confirm one of the basic particularities of modern agriculture, revealing itself in the bi-sectoral agrarian structure, i.e. in the parallel existence of two multi-form methods of agricultural production.

Different types of family farms, on the one hand, and different legal forms of collective farms, on the other hand, are the two opposite and mutually complementing sectors of agricultural economy. Agriculture as a complicated non-linear social and economic system capable of self-organization originates from this bi-sectoral division.

The analysis of empirical data, received during the process of research of different forms of farming on the territory of a typical agricultural district, gives us rather convincing facts. Pytalovo rayon of the Pskov oblast, where experimental and scientific research activity had been conducted by the laboratory of All-Russia Institute of Agrarian Problems and Informatics (Pytalovo Laboratory of the Agrarian Institute) since 1986, was taken as an object for monitoring.

[*] Head of the Pytalovo Laboratory of All-Russia Institute of Agrarian Problems and Informatics (Pskov oblast), Ph.D.

The subject of research is the activity of a rural family, members of which are engaged in farming, using collective as well as individual and family forms of organization of agricultural production.

Such a family is examined as a primary cell of social organization of a rural community. The results of any agrarian reforms and economic transformations in the countryside eventually depend on it.

It is necessary to point out that in the period of 1986 – 1988 surveys embraced experimental individual private farms and tenantry collectives and since 1989 - all the forms of agricultural economy in the district, namely: 18–20 large-scale farms of different legal status, 270 – 320 individual private farms, 3,6 thousand household farms, 1,9 thousand families, having land parcels in collective orchards and gardens.

In 1999 a regular complex survey completed the 10-year research period. Thanks to the results of monitoring it is possible to determine the actual tendencies in the development of family farms, to define their economic and social nature, to evaluate the character and the degree of their interaction with the sector of large-scale farms, to offer the classification (typology) of family farms, reflecting the new market environment.

The survey data, although confined to the territory of one district and its conditions, allows to precise the conceptual system reflecting the specifics of family farms' development in the peculiar Russian reality.

According to the Russian Federation's legislation household plots and other small forms of family farms are the legal types of non-commercial activity. According to international statistics standards they are the components of non-official, non-registered, i.e. “shadow” economy.

It is obvious that “shadow” farms should not be the main kind of population's economic activity and should not predominate in the system of production and economic relations. They are to play a subsidiary, secondary role, offsetting some shortages of the real sector.

The legal status and social and economic importance of family farms in the pre-reform (Soviet) period corresponded to the above concept. They were regarded as a form of rural residents' secondary occupation and were subsistence by their nature.

Besides, in the pre-reform period quite a distinct frontier divided the economic and legal space of collective and family farms. The state ownership and its forms had complete dominion in the sector of collective large-scale farms while family farms were privately owned.

Following the reorganization of collective and state farms and privatization of their property, a "new" (in the view of rural residents) type of ownership emerged in the sector of collective large-scale farms: joint and joint share. As different from the joint property of family farms, the property and land shares of reorganized collective and state farms were not popularly regarded as individual private property. Even after 8 years of reforms they remain a deformed state property in the opinion of most rural residents.

Earlier a rural resident had a rather clear orientation in the system of social and economic values, and basing of the previous generations' experience knew perfectly well that his labor in a family farm is his individual (private) business and plays a secondary role in respect to his labor in a collective large-scale farm.

At present, having become a co-owner of reorganized collective and state farms' property independently of his will or evolution, a rural resident lost his social orientation and is unable to understand how should he, a rural commodity producer, serve the interests of the society. It's natural that in this uncertain, unstable situation rural residents including the local economic elite focused on the activity beneficial for their families.

The analysis of labor, property and land relations in which a rural family is involved as well as of its various economic links evidences that the labor activity of rural residents is focused in household and other small family farms.

For example, in the group of family farms 720 – 760 thousands man-days were spent on agricultural production, which equaled 72 – 77% of the total labor inputs in agriculture. Of the 5,1 thousand grown-up members of rural families 1,2 thousand had full-time occupation in individual private and household farms, and only 0,8 thousand - in collective large-scale farms.

In accordance with the survey data family farms actually use 47% of agricultural land in the district which is 2.2 times over the land area that has been passed into their ownership and possession during the reform period. At the same time they possess only 19% of agricultural fixed assets (Table 1).

Family farms make the major contribution to the district food balance. The average annual output of family farms in 1996 – 1998 amounted to 42 million rubles (in 1998 prices), which was 83% of the total GAO in the district. The similar share in the Pskov oblast in general was about 77% at that time.

In 1996-1998 family farms produced 610-630 kilograms of milk, 40-44 kilograms of meat, 710-730 kilograms of potatoes, 170-175 kilograms of vegetables and fruits per one resident of the district. Collective farms produced 181 kilograms of milk (22%) and 8 kilograms of meat (16%) per capita.

Is such a proportion of shadow and real sectors the result of mistakes and failures of the implemented agrarian reforms?

No doubt, serious mistakes in the process of agrarian restructuring took and are taking place. But the analysis of agricultural development in the Pytalovo rayon and the Pskov oblast during 20 years preceding the current reforms shows, that the present proportion between the basic sectors of agriculture in this region is the result of social and economic tendency, having its origin long before the reforms.

Thus, in 1978 the share of family farms in the Russia's GAO was 23%. In the Pskov oblast it amounted to 37%, in the Pytalovo rayon - to 41 %. In 1990 Russian family farms produced 24% of the GAO while in the Pskov oblast this share reached 49%, in the Pytalovo rayon - 51%.

For economists of the Soviet school family farms have always been in the "shadow" of large collective farms. They were regarded as "remnants" of the past, as a non-perspective, non-efficient in terms of the scientific progress form of farming.

However, at the end of 90's the concept of undeniable advantages of any large-size farm as compared to a small one though optimized to natural and economic conditions, has not yet been critically revised.

In this case we confront a conceptual mistake, the essence of which is the under-estimation of family farms' role and importance as one of the two basic agrarian sectors that has its own resource basis and closely cooperates with the sector of large-scale farms.

The most common approach to the analysis of bi-sectoral agricultural economy consists in regarding family farms as small businesses. Indeed, family farms can and must be examined as property complexes, created for the production of agricultural output (agricultural property complexes), belonging to one family or several families, linked by relative ties, on the basis of ownership, tenancy or usage rights.

From this point of view family farms and large-scale farms are characterized by the land area cultivated, number of workers, labor productivity and intensity, availability of fixed assets, machinery and

equipment, production intensity, the share of marketed commodities in the total output, efficiency of production, etc.

An objective comparative analysis of family farms' and large-scale farms' performance doesn't provide a hard evidence of one of them being more advantageous. It would be more correct to say that they complement each other, offset and mitigate the each other's shortages.

However, being separate parts of the unified complex social and economic agrosystem, family farms and large-scale farms have at least three basic distinctions: the purposes of farming; the nature and mechanisms of regulating internal economic relations; the principles of producing and distributing the final product (income).

Let's examine it in detail. Depressed regions of Russia with extensive agricultural production, such as the Pytalovo rayon and the Pskov oblast on the whole, are characterized by the predominance of a specific type of family farms, where the agricultural property complex is not separated from the household, but is rather an integral part of it.

The particularity of the above type of family farms is that housekeeping, social functions and production of agricultural output are united into a permanent and constantly resuming process of family subsistence.

Families having in their ownership the above farms, differ from all other rural and urban residents by the specific style of their life based on the absolute necessity to fulfil daily farming operations and works in time, conforming to the natural biological rhythms as well as requirements of domestic animals.

In the Pytalovo rayon all family gardens as well as the majority of household and individual private farms belong to the above type.

The agricultural property complex of a family can be separated from the household. It occurs in two cases. First, it occurs when a family farm is owned by two or more families and is jointly used by them. The separation is determined by the necessity to fairly divide the household expenditures and the final agricultural product (income) between families.

Second, the separation of agricultural property from household becomes a necessary condition of successful farming in case when hired labor predominates in the labor inputs. In these farms hired workers are the actual users of agricultural property complex, and its separation from the household of a family- owner becomes the necessary condition of rational distribution of inputs and funds between production, consumption and accumulation of the family-owner.

From our point of view, the separation of family farm from household becomes an objective necessity when the level of development of production forces in the society as well as of the division of labor and market relations becomes so high and perfect, that a producer of agricultural commodities finds convenient, profitable and prestigious to sell all the output produced and to buy all the necessary things for consumption and production process. Under the named circumstances any family farm becomes an entrepreneurial one in case its owner does not pursue other social purposes.

Examples of separation of family farms from households are numerous in the Western Europe and the North America. These are the entrepreneurial farms, where one or several members of a family are the owners, and the scale and intensity of production require large inputs of hired labor.

For the economy of Russia, suffering long and painful transition to civilized (developed) market, with very low professional level of mass agricultural producers, family farms not separated from households are typical, as they have very high sustainability.

The above circumstance is extremely important for the description of economic and social nature of family farms in Russia.

In family farms not separated from households, labor, property and other personal relations are typically based on traditions, customs and habits, not always regulated by the legislation and usually not fixed in any constituent documents or agreements.

As a matter of fact all in-farm economic and personal relations are regulated by the local moral and business customs.

The most important distinction of family farms of this type is the principle of producing and distributing the final product (income), gained from farming. In such farms the labor of its members has no price in the form of salary.

The market value of labor is actually used by the owner of such family farm only for payment to hired workers and for assessment of minimum earnings of family members if prescribed by the country legislation.

The payment for labor to members of a family farm, not separated from household, is reflected not in the production costs, as it takes place in agricultural enterprises and entrepreneurial farms, but in the final product (income).

In the named farms revenues used for consumption in in-kind and money forms become at the same time the expenses on family's subsistence, including reproduction of its own labor force. This is the main economic distinction between family farms and agricultural enterprises.

The social purpose of any family farm is the subsistence of a family and its reproduction as a whole and not only of its labor capacity. In this aspect it has nothing common with an agricultural enterprise of any organizational and legal form, which is always a commercial or non-commercial organization of citizens, having in their ownership, tenancy, economic possession or operational management some property, separated from their households and used for receiving profit or some consumer or social services.

An economically prosperous large-scale farm only indirectly contributes to the growth or maintaining of the well-being of families, members of which work in it, e.g. through the size of salary, quality and volume of services, profit distribution.

In family farms, independently of their economic and financial situation, production expenditures and the final product (income) distribution are always determined by their social purpose, being prior to any other economic, financial or political ones. For example, an owner of a family farm can sell his output even knowing that it entails losses, only because he needs money for normal subsistence of his family.

The high sustainability of family farms in extreme circumstances as compared to large-scale farms has long been noticed by foreign and Russian researchers as well as the conservatism of the majority of their owners to any innovations entailing larger production expenditures. This is determined, first, by the internal mechanism of production and distribution of the final product (income) which inclines members of a family farm to high self-exploitation, which is impossible for hired labor in a market economy.

It is necessary to point out that the non-separation of family farms from households should be taken into consideration by everyone who performs accounting, control and regulation of the activity of individual private, household or any other family farms. For example, the state statistical bodies obtain information on household and other family farms by studying households of urban and rural residents, thus recognizing the non-separation of farming from household.

In household books of local authorities rural residents' households are regarded as a whole and the property of their individual private or household farms is not separated.

At the same time the under-estimation of the above by tax bodies resulted in the fact that individual private farmers can report according to form ? 5-KH "Financial reports" only under-stating the actual incomes and expenditures of their farms.

We can not state that the non-separation of farming from households is a national peculiarity of family farms in Russia. The same type of agricultural economy predominates on the entire post-Soviet territory including Baltic, Central Asia and North-Caucasian countries. It has formed as a production method under the long-term rigid limitations of the Russian peasants' rights to possess and use land and of the entrepreneurial activity during the Soviet period.

In the planned centralized (non-market) economic system these limitations were based on the concept of development of the agrarian economy, that was to include two sectors: the technically well-equipped sector of large-scale commodity-producing farms as the main and the real one, and the subsistence population's farms as a subsidiary and non-formal one.

In a market economy, when the economic activity of individuals and their associations (legal entities) is liberalized, the above concept cannot be efficient although in Russia it persists in the public opinion, in legislative acts, in programs of state and public organizations.

The evidence of that is the current official classification of family farms, that was formerly defined in the pre-reform legislation but is still widely used for the state regulation of population's economic activity in the new market environment.

According to it all family farms are considered to be subsistence ones, except for those registered as individual private (peasant) farms. However, the actual economic behavior of rural residents on agricultural commodity markets is determined not by the legal status of their farms, but by the virtual circumstances in which they operate.

Given these circumstances each rural family establishes and practices such a form of family farming that it currently needs and that complies with its capabilities.

Most generally, the perspectives of family farms' development depend on a rural family's economic, social and moral interests. It's up to such a family to determine whether to limit farming to a small-scale subsistence

production, to expand it to the scale enabling to get an alternative money income, to create a large-scale farm of entrepreneurial type or to stop farming.

The analysis of food balances and gross incomes of different social groups of rural families in the Pytalovo rayon shows that the share of self-produced agricultural products in these balances can amount to 80% (in the families of pensioners, unemployed, unmarried mothers, families with many children, migrants); however, these products account for not more than 30% of the gross income.

In case a family farm is actually the sole or the main source of gross family income, its owner has to conduct entrepreneurial activity in agriculture or related industries. In this case the share of in-kind and money incomes from family farming in the gross family income reaches 70% and more.

Thus, family farms, independently of their legal status, can be regarded as purely subsistence ones, if their share in gross family income is not more than 30%, and as purely entrepreneurial ones, if the above share is 70% and more. Owners of other farms conduct entrepreneurial activity occasionally - i.e. during the season of ‘abundant milk”, after harvesting, in the period of autumn livestock slaughter, etc.

In 1996 the grouping of individual private farms according to the farming's share in gross income showed that from 314 individual private farms only 89 (28%) could be regarded as entrepreneurial ones. Other “farmers” have either purely subsistence farms (20%) or conduct entrepreneurial activity occasionally (52%) (Table 2).

The grouping of household farms presented a similar picture. One group is formed of 662 household farms (18%) in which in-kind and money revenues from farming account for more than 70% of the family gross income. Owners of these household farms permanently sell agricultural commodities at local food markets acting as illegal entrepreneurs.

The group of purely subsistence household farms includes 1220 farms (33%). Most families possessing household farms (49%), like most individual private farmers, conduct entrepreneurial activity only occasionally.

Thus, owners of both individual private and household farms in the district occupy the same "niche" at the local food market and their market behavior is absolutely similar.

A somewhat different picture resulted from the grouping of family farms in collective orchards and gardens. Of the 1940 families of gardeners only 420 (22%) cultivated potatoes, vegetables and fruits in the volumes exceeding their needs and thus had an opportunity to sell the surplus at local food markets in autumn and winter.

Money and in-kind revenues from farming in the above group of gardeners averaged 43% of the gross family income.

On the whole, according to the data of budget survey as of January 1, 1999, of 5,9 thousand family farms in the Pytalovo rayon 760 (13%) were actually entrepreneurial ones, both by the nature of economic activity (share of farming in the gross income) and by the volume of agricultural output sold (it exceeded the volume of self-consumed output).

According to the effective official classification, 314 individual private farms were registered as entrepreneurial ones in the statistics department and the tax inspection as of the same date. Only 89 of them (or 12% of the total number of entrepreneurial farms in the district) actually conducted entrepreneurial activity and thus could be subjects of the real sector of agrarian economy.

Only 2,9 thousand family farms (47%) were purely subsistence ones while according to the effective legal classification this group embraced 5,6 thousand family farms (95%).

Of the legally "subsistence" family farms one half conducts entrepreneurial activity occasionally in the form of secondary labor occupation of family members, and one fifth is purely entrepreneurial. According to the results of budget survey, these two groups of farms (totalling 2,7 thousand) had an annual turnover slightly less than 46 million rubles, including 12 million rubles of money revenues. This non-accounted turnover of family farms 2,8 times exceeded the total money revenues of all agricultural enterprises and individual private farms, registered by the state statistics and tax bodies.

It's notable, that by 1998 the production of major agricultural commodities in the sector of family farms increased by 72%, and in the sector of large-scale farms - shrank by 39% as compared to the pre-reform period.

Thus we can make quite a definite conclusion: the present classification of family farms, based on their formal status division into entrepreneurial and subsistence ones, not taking into account the nature of their actual economic activity, has become out-dated since in the market environment it does not reflect the actual GAO exchange and distribution relations. The

classification can be used only as a regulator of land relations and only because agricultural land market in Russia develops very slowly.

Naturally, the following questions arise: why has this illegal ("shadow") sector become predominant? Due to what factors and how has it become possible? There are two reasons for that.

First, within the 1991-1998 period the resource and technical basis of family farms has notably improved. It's enough to say that they possess more tractors and machinery as compared to collective large-scale farms (except for grain combines and lorries). This sector has 68% more cattle, including twice more cows. Almost all sheep and poultry, all potato and vegetable plantings are concentrated in family farms.

Second, as compared to the pre-reform period the economic links of family farms with other market institutions have become much more diversified. While in 1986-1990 owners of family farms obtained 78-85% of all inputs required for farming in collective and state farms, in 1996-1998 they purchased 40-42% of inputs in retail and wholesale trade, 29-31% - right in their locations, from residents of the same villages (Table 3).

At the same time family farms continue to closely cooperate with collective large-scale farms.

Large-scale farms' means of production are annually used for performing different works in family farms on an area of 8-9 thousand hectares, which is over 1/3 of the total volume of mechanized works. Owners of individual private and household farms obtain 26% of all inputs and services, including 42% of transportation works, 58% of feeds and grain, 29% of construction materials and timber, 19 % of fuels and 14% of cattle and pigs from large-scale farms.

The total value of shadow in-kind turnover in the district amounts to 20 – 25% of the direct material expenditures of large-scale farms included into their production costs.

Thousands of rural residents, including the local economic elite, with the help of shadow in-kind turnover and illegal transactions exercise the secondary redistribution of material resources thus offsetting the incompleteness of privatization and restructuring processes. Thanks to their efforts the real sector more and more apparently becomes an appendix of the shadow economy.

The local economic elite is interested in maintaining the non-formal links that have developed. It welcomes any attempts of federal and regional

authorities to support large-scale farms, for in recent years this aid contributed to the development of shadow in-kind turnover.

More than 400 individual private and household farms belong to the local elite. All of them usually have good residential and production buildings and are well equipped with tractors, cars and other agricultural machinery. Through its family farms the agricultural elite transfers a large amount of shadow in-kind turnover of large-scale farms, transforming it into a non-accounted cash turnover of their own family farms.

The presence of cash revenues in a family farm income apparently evidences that its owner is engaged not only in the subsistence farming but as well in the production of commodities and services to be marketed for profit (net income).

Taking into consideration the general principles of civil law, the release of owners of household and other small family farms from taxes on cash returns can not be considered lawful enough. It was reasonable and fair in the non-market economy, when the individual entrepreneurship was strictly limited.

Nowadays the above privilege objectively contributes to the expansion of non-formal economic relations, promotes the development of shadow economy in agriculture. The local economic elite has already completed the outpass to shadow economy with the help of family farms. In 1998 – 1999 the mass outflow of ordinary individual private farms into "household farms" has started.

During the previous years (1987 – 1997) the above tendency also took place. Thus, of 52 individual private farms that ceased to be private, 41 (or 79%) remained in farming as household ones. In 1999 100 individual private farmers (35% of their total number as of January 1, 1999) applied to district authorities with the request to register them as household farms although maintaining the same land areas. Such a maneuver is permitted by the federal and local legislation.

It is well known that the "General provisions" of the RF Civil Code are the basis for regulating all kinds of entrepreneurial activity. This allows to adopt an appropriate federal and regional legislation, legalizing the entrepreneurial activity of family farms taking into account their social and economic particularities.

No doubt, the entrepreneurial activity of the above category of producers requires application of a simplified system of accounting the taxable gross income. The rate of tax on cash returns of a family farm will have the

principal importance. It should be limited to 2-5% of the annual cash returns of a family farm.

The tax on cash returns has not only to legalize and to make the entrepreneurial activity of family farms accountable, but to contribute to the development of a system of public self-administration in the countryside.

In order to secure the social orientation of the taxation, it is necessary to include 2 provisions of principal importance into the legal acts. First, the tax is to be directly transferred from a taxpayer to the local administration's budget without any intermediate links and is to be used for the economic and social development of that particular territory, where the taxpayer lives or operates.

Second, the primary accounting and reporting to the rural community and state tax service as to the collection and usage of taxes are to be exercised by the grassroot links of the public self-administration: village elders, public representatives authorized by the local administration.

Only the above measures will help population to regard the tax on cash returns of family farms as a legal form of self-taxation. Only under these circumstances, supported by a proper information campaign, the above tax can become a "common good" rather than another fiscal measure of the state.

The current social and economic situation in agriculture of the Pytalovo rayon as well as of the Pskov oblast in general, evidently proves that the economic liberalization, restructuring of collective and state farms, privatization of their property turned out to be no more and no less than the preconditions for further evolutionary reforms of the agrarian sector, its deep restructuring, the creation of market economy institutions.

However, the local elite had neither will nor professional skills to utilize these preconditions, to implement the most complicated and still the most creative part of agrarian reforms, which can be constructive only as a regional program, an action program of local self-administration.

After the 8-year period of making no headway from the initial stage of agrarian reforms, a shadow economy has started to slowly but steadily develop on the economic space of dismantled collective and state farms, diversified non-formal links and relations offsetting the lack of market institutions have expanded.

The agrarian crisis as an integral part of the Russia's system crisis can hardly be overcome by recovering separate segments of the real sector, as federal and many regional authorities try to do.

In depressed agricultural districts there are no segments of the real sector left, which could be used as "engines" of the general economic growth. For the above purpose, the programs providing for gradual involvement of all subjects of the agrarian shadow sector into the legal, registered entrepreneurial activity both by methods of legal regulating and with the help of organizational and economic measures based on cooperation and integration of family farms with the real sector of agrarian economy, should be implemented here.

It is necessary to confess that there are some districts in Russia, similar to the Pytalovo rayon, where the virtual possibilities of economic growth in agriculture are directly connected with the evolution of family subsistence farms in the market direction, with the expansion of their entrepreneurial activity. The mentioned evolution is impossible without further gradual reforming of the former collective and state farms, without perfecting their production structure and management.

Large-scale farms (former collective and state farms) can not produce competitive output in a district being economically weak, subsidized, socially under-developed and short of skilled labor. But they can resume their role as a leading sector of the district's agribusiness in case of proper restructuring entailing the transfer of a significant part of their assets and labor resources from the primary production of agricultural output to the sphere of production and social services to family farms, including the processing and marketing of their output.

This conclusion refers only to depressed areas, like the Pytalovo rayon, where family farms of different types have already become the main agricultural commodity producers.

Table 1. The production potential of family farms and large-scale farms in the Pytalovo district of the Pskov oblast

Indicators	Large-scale farms	Family farms	Total
Number of farms	20	5940	5960
Cultivated land area, thous. ha as % of the total	30,4 33	27,2 47	57,6 100
Fixed assets, mln. Roubles as % of the total	213145 81	49997 19	263142 100
Labour inputs, thous. man-days as % of the total	217 23	770 77	987 100
Gross output, mln. Roubles as % of the total	8 17	42 83	50 100

Table 2. The grouping of family farms according to the share of farming in the gross income of a family

The share of farming, %	Types of family farms						Total	
	Individual private farms		Household farms		Gardens			
	Num-ber	%	Num-ber	%	Num-ber	%	Num-ber	%
Subsistence, 30% and less	62	20	1215	33	1256	78	2803	47
Mixed, 31-70%	163	52	1804	49	420	22	2387	40
Entrepreneurial, 70% and more	89	28	662	18	-	-	761	13
Total	314	100	3681	100	1946	100	5941	100

Table 3. Family farms: the sources of inputs, %

Inputs	Retail trade	Wholesale trade	Agricultural enterprises	Residents of the same rural locations
Seeds, seedlings	62	6	16	16
Livestock and poultry younglings	54	-	14	32
Machinery and equipment	74	5	9	12
Fuels and oils	66	11	19	4
Feeds, grain	14	-	58	38
Repairs, construction	-	-	5	95
Transport	-	-	42	58
Total	41	2	26	31

Economic Behavior and Efficiency of Household Farms in Transitional Economy

Tarasov A.N.[*]

The reorganization of collective and state farms and the land reform have had a significant bearing both on the production structure and on the legal forms of agricultural enterprises. The process of transformation resulted in an agrarian structure embracing three groups of agricultural producers. The first group consists of large collective entities with varying motivation for economic behavior and owned by a large number of proprietors. The second group is composed of peasants' (farmers') entities with a few members, their associations and the rural entrepreneurs. The third group is made up of the household farms. This group has certain distinctive features. Members of the rural household farms involved in agricultural production are, as a rule, not only household farmers, but also employees of enterprises of the first two groups. Their specialization and the ratio of commodity output is varying. Today they play an important role in the production of food for rural families and their relatives, and their existence is determined by the grave financial problems of the rural population. The economic and social importance of this group will vary with the emergence (disappearance) of the employment opportunities for their members and with the income earned in large farms and private companies, or from non-agricultural activities. It will also depend on the value attached to the member's work at his household farm. Besides, the importance of household farms (HFs) depends on the development and structure of the land market, the closeness of their economic ties with enterprises of the other groups in the agrarian structure, on the taxation laws and other regulations.

Analysis of the economic behavior and performance of household farms was based on the information obtained by the Russian National Research Institute of Economics and Norms in the course of field examination of the rural household farms engaged in agricultural production in the Rostov Province in 1997 (329 HFs), 1998 (284 HFs) and in 1999 (159 HFs), as well as in the steppe areas of the North Caucasus in 1998 (126 HFs). The results were obtained by single-stage random sampling.

[*] Deputy Director of the Russian National Research Institute of Economics and Norms (Rostov-on-Don), Ph.D.

During the 20th century Russia was subjected to frequent agrarian reforms. The political and economic conditions for emergence of household farms in the USSR appeared only after the revolution of 1917. The Decree on Land approved by the Second All-Russia Congress of Soviets (October 26 (November 8 by the modern calendar), 1917) provided for different forms of land ownership. However, the Soviet authorities promoted political and economic measures in support of the collective farming. Finally, the 15th Congress of the All-Russia Communist Party (Bolsheviks), then the 16th Party Conference held in April 1929 determined that the way to improve the productivity of agricultural production in the Soviet Union is through creation of large collective farms. It was resolved to bring 5-6 million peasant households (4, p.7) into socialist-type enterprises during the first five-year period. As a result of the economic policy pursued by the Soviet power in the countryside, all land granted to peasants in 1917-1920 was transferred to collective ownership. In the course of mass collectivization the social and political situation was mitigated by granting small individual farm plots to peasants after their joining collective farms. The right of a collective farmer to his household farm was legalized in February 1935 when the Second National Congress of Front-Rank Collective Farmers approved the new Standard Regulations of a Collective Farm.

It was assumed that a household farm had to be subsidiary, however the economic significance of this type of farms for the national economy far transcended its small size. In 1937 the household farms of collective farmers accounted for 40% of the gross agricultural product, and from 1/2 to 2/3 of livestock output (4, p.7). In 1998 household farms produced 91% of all potatoes, 76% of vegetables, 56% of meat, and 47% of milk, and their share in the gross agricultural product was 53%. At the same time the economic standing of the household farms was not always that high. In the years 1930-80 the agricultural production in household farms varied with the state economic policies. For example, in 1939 the Central Committee of the All-Union Communist Party issued a resolution to limit the size of household farms and to introduce labor rates in public farms. Implementation of the requirements of this party document reduced the share of household farms in the gross agricultural product to 27%. The state limitations on HFs in the end of the 1950s and in the beginning of the 1960s further reduced their share in the agricultural product to 13% (1965). On the contrary, lifting of limitations and state support stimulated the expansion of production in household farms. However, in the years preceding the reforms (1985-1990) the share of household farms in the gross agricultural product had a tendency to decrease (despite the

measures taken to promote HFs) and remained at the level of 23-26%. In our opinion, these great fluctuations in the HF gross product are explained not only by the varying state pressure on this group of agricultural producers, but also by the level of personal incomes of the rural population earned in collective and state farms. The larger personal income from work in the collective (state) farm made the Soviet peasant less willing to work in his household farm, while lower incomes led to the intensification of his labor in the household farm and, as a result, to the increase of its share in the gross agricultural product. Thus, the increase in wages of a Soviet agricultural worker from 39 kg of grain per day in 1970 to 45 kg of grain per day in 1985 led to the decrease in the share of HFs in the gross agricultural product from 31% in 1970 to 23% in 1985.

Along with the social and political factors of emergence and development of the household farms in the Soviet period, an important role in their preservation in the national economy was played by the fact that throughout the whole history of the USSR the country's population suffered from food shortages, and the supply of trading and catering services and food products to the countryside has always been below the required level. Thus, e.g., the required number of seats in catering establishments being 40 per 1,000 residents, the actual average in rural Russia by the end of the Soviet period was 25.4 seats or 63.5% of the required level.

The transition from the socialist economy to a market economy greatly raised the economic importance of the HFs. This was due to several factors:

First – household farms have become the basic way to avoid the risk of poverty and to preserve the social status for almost half of the country's population;

Second – the dramatic reduction (actually halving in the grain equivalent) of wages in agriculture, and their chronic arrears predetermined the role of HFs as the main source of incomes of the rural population;

Third - in the course of large-scale farms' adjustment to the economic conditions of the transitional period household farms are included in the system of their "survival" as the source of current capital (for private companies), and as the way to ensure the competitive edge (for large-scale farms);

Fourth - household farms have become the center of population's labour activity;

Fifth – household farms engaged in agricultural production are a factor of social and political stability in the labor-redundant and depressed regions of Russia.

The view of other researchers on the reasons for changing the HFs' role in the agrarian economy may differ from mine. However, the examination of the principal features of a household farm in the transitional economy conditions will be incomplete, unless we tackle the matter of how the new economic order effects the business (economic) stability of the third group of the agricultural producers. It is expedient to refer to the author practically not quoted nowadays – V.I.Lenin. In his review of The Agrarian Question by K.Kautsky he wrote: "Small-scale farming acquires stability only when it ceases to compete with large-scale farming and turns into the supplier of labor for the latter." (5, p.91). This statement made by Lenin in the beginning of the 20th century is still true now, at the end of it. A sound proof of that is given by the comparison of production volumes and their distribution among the groups of agricultural commodity producers throughout the period of economic reforms in Russia. Starting from 1992 the structure of agricultural production was changing fast. Large-scale farms became more specialized in the production of cereals, sunflower seeds and sugar beet. In the Rostov Province such farms produced in 1999 more than 87% of grain. At the same time individual commodity producers boost the production of potatoes, vegetables, meat and milk. In 1998 the HFs in the Rostov Province produced 77.2% of meat in slaughter weight, and 72.4% of milk.

Based on the data of the Russian State Committee for Statistics, in 1997 all household farms produced 2,256,000[1] tons of fruit, berries and grapes or 73.4% of their gross production. In my opinion, this great difference in the production specialisation is accounted for by the changes in distribution of productive forces (sown fields, livestock, poultry, etc.) among different structural groups of the agricultural economy, which excludes, at this stage, any competition between large and small-scale agricultural production. Comparing large and small-scale "land-working" during the last 7-8 years, I came to the conclusion that the dismantle of the socialist economic system, which resurrected private property in Russia and introduced market principles of business organization, allowed various groups of rural commodity producers to bank on their competitive edge

[1] Russian Yearbook of Statistics. Stat.coll../Russian State Committee for Statistics – Moscow, 1998, p.479.

and to occupy their place in agricultural production and on the food market.

Stability of the small-scale production is currently determined by the inclusion of household farms into the orbit of business activity of large agricultural and food processing enterprises.

The cooperation of HFs with large-scale producers is not an exclusive feature of the Russian transitional economy. The links of household farms engaged in agricultural production with large-scale farms existed in the Soviet economy in this or that form. The distinction between the Russian and the Soviet models consists, first, in the scale of interpenetration of small and large-scale agricultural producers (HFs use legal and illegal channels to procure inputs, while large-scale farms use "field tenancy" as a way to evade including 20-25%[2] of the sown areas and up to 25-30%[3] of grain production into their accounts); second, in the problems that they solve (it is important for household farms to maintain economic and labor links with large-scale farms in order to secure social and physical survival, while large collective or private farms solve the problem of labor resources, keep up the labor motivation of their employees and formalize the overflow of material resources); and third, actually there has been formed a mutually beneficial economic union of the small and large-scale businesses. The essence of this economic union consists in that it creates a certain economic institute, which brings about additional effect for the interacting groups of agricultural producers due to the properties inherent to HFs and to large-scale agricultural business.

The effect of this economic union for a household farm consists in that an individual agricultural producer saves on the production costs and builds up his cash income (I) due to the difference in prices for inputs: $\Delta P_x = (P_x' - P_x'')$, where P_x' is the actual prices for inputs obtained by HF from large farm, and P_x'' is the prices for the same inputs on the free market. A large-scale farm benefits by saving on labor costs ($\Delta W (L_i)$).

It is known that after the reorganization of collective and state farms the

[2] Models of agricultural production in household farms. – Rostov-on-Don.: Korall-Mikro Publ.Center, 1999, p.11 (5).

[3] Id., p.8.

remuneration of large-farm employees is determined by the formula:

$$W(L_i) = W + \lambda_{\pi i}(L_i), \qquad (1)$$

where $W(L_i)$ is the income of large-scale farm members in rubles; W is the money constituent of the remuneration in rubles; and $\lambda_{\pi i}(L_i)$ is the share of the members in the products, works and services of their large-scale farm in rubles. The employees' shares in the income of their farm $\lambda_{\pi i}(L_i)$ are determined by each large farm at its discretion and depends on the honesty of management and on the economic capabilities of the agricultural enterprise. As a rule, the shares of the members $\lambda_{\pi i}(L_i)$ are paid in agricultural produce, food, fodder, works and services. The amount of such remuneration in the Rostov Province varies from 2 to 9% of the gross grain production (but not less than 500 kg), 2-5% of the gross sunflower seeds production (but not less than 50 kg), etc. Given that the money remuneration has not been paid for three or more years or paid irregularly and in amounts not exceeding the minimum monthly wage, it can be assumed that $W(L_i) = \lambda_{\pi i}(L_i) = W(L_i)'$. However, the motivational expectation of remuneration by the employees is determined by formula (1). The difference between the expected amount of remuneration $W(L_i)''$ and the actual amount $W(L_i)'$ is the economy of an enterprise on labor costs. We can assume that the price of interlinking "large farm – resources, works, services – HF" will be

$$P_x' = W(L_i)' = \lambda_{\pi i} \qquad (2)$$

Interpreting formula (2) I can say that the barter economy is developing in the sphere of labour relations as well. The economic union of large-scale agricultural commodity farms and individual agricultural producers brings about other additional effects (6, p.8-11), which provide for stability and survival of both groups under the existing economic situation, as well as for "… their symbiosis, non-competition" (2, p.40).

However, the examined sustainability factor of household farms engaged in agricultural production comprises a certain element of instability. This is due to the fact that the overwhelming majority of large collective and private farms are currently economically weak and short of resources and they are sometimes unable to provide HFs with the required volumes of inputs, works and services. This conclusion is illustrated by the results of conducted surveys (Table 1):

Table 1. The distribution of responses to the question "What difficulties do you encounter in household farming? ", as % of their total number

?	Difficulties in household farming	Polls	
		1997 ?. (N=329)	1999 ?. (N=159)
1	High labour consumption	38,0	74,0
2	Products' marketing	80,0	30,0
3	Shortage of land	16,0	26,0
4	Shortage of agricultural machinery	12,0	43,0
5	Shortage of production buildings	19,0	42,0
6	Shortage of feeds	87,0	90,0
7	Youngling supply	19,0	23,0

Given that the share of HFs in the supply of meat and milk to processing plants in the Rostov Province is currently 29-52%, and in the North Caucasus region in general - 20-60%, the HFs' produce may soon encounter serious problems with quality tests, inspections of its compliance with standards of raw materials for the production of competitive food products.

Naturally, the new economic relations between large and small-scale landworking after the change of economic and political situation in Russia have a great impact on the behavior of HFs in the business environment. However, there are other factors and motives that significantly influence the economic behavior of an individual agricultural producer and determine his sustainability during economic crises.

In his analysis of a peasant farm A.V.Chayanov underlined that "…we should accept either the concept of fictitious ambiguity of a peasant, who combines in his person both the employee and the employer, or the family farm concept with work motivation similar to piece-rate work" (7, p.130-131). Pointing out the differences between a family farm and a capitalist farm, he stressed that in the former the peasant himself determined hours and intensity of his work. This will lead either to the development of "self-exploitation" beyond the point of maximum profit in order to secure the income sufficient for satisfaction of the consumer preferences, or to the reduction of labor intensity as soon as a balance is attained between the income and the requirements, even if the profit hasn't reached its maximum level.

Assessing the dynamics of labor input in and profitability of a household farm by means of the family farm utility function, we come to the conclusion that the production volume of an HF is directly dependent on the labor input of each member, the value of which is determined by the ratio of household money income and labour inputs for its production (I/L_i). In this connection, as long as each new fraction of labor input is repaid by the additional income, the household farm members will prefer more self-exploitation. Thus, the reduction of labor value decreases the labor input, the production and supply volume, and the HF's profitability.

Let us assess the value of labour of a household farm member (I/L_i, rubles/man-hr) engaged in an HF using the example of rural population of the Rostov Province. The analysis of income received by household farms from agricultural production and of labour hours spent shows that the growth of income that started in 1990 raised the labour value. However, beginning from 1994, the income/labor hours ratio started to decrease. The assessment of a household farm income in absolute prices for agricultural products gives the following dynamics of the labor value:

1993	1994	1996
303.6 rubles/man-hr	3,350.5 rubles/man-hr	3,178.7 rubles/man-hr

Another example: assessment of the income from HFs in the year 1990 (A) and in the year 1993 (B) prices for agricultural products. The above tendency is again apparent:

A.

1993	1994	1996
15.5 rubles/man-hr	150.9 rubles/man-hr	124.7 rubles/man-hr

B.

1993	1994	1996
303.6 rubles/man-hr	385.1 rubles/man-hr	264.9 rubles/man-hr

The above analysis allows me to make the conclusion that the behavior of the third group of agricultural producers is best described by the model of A.V.Chayanov. This conclusion is further supported by the fact that in a significant number of HFs the labor and money costs are higher than the market value of their products. For example, in the horticultural and gardening partnerships of the Moscow Province the market value of their agricultural products is 13.9% less than the production costs, and in Russia in general 38% of all household farmers polled said that the household farm production costs are higher than the market value of their products,

and 20% thought that the costs and the returns were equivalent (4, p.31-32). The economic performance of 898 HFs studied in 1997-1998 in the Rostov Province, Stavropol and Krasnodar Territories corroborates the above tendency. Depending on the size and type of a household farm, the cost of agricultural production amounted to 1,940 – 13,300 denominated rubles, the proceeds from sales - to 0,090 - 10,500 rubles, and the value of total output - to 1,900-24,600rubles. In 25% of the studied farms the costs exceeded the products' value, and in 30.5% of cases the costs and proceeds were equal. In my view, this is an evidence that the behavior of HFs is determined not only by the market forces. According to the sociological poll conducted by the Institute of Agrarian Problems of the Russian Academy of Sciences, for 85 % of respondents household farms are the basis for producing foods, for 57% they are as well a source of additional money incomes, for 14% - an opportunity to help urban relatives with food and money (1, p.36). This data proves once again that household farming is first of all the basis for population's survival. At the same time for 19% of individual private farmers in the Rostov Province HFs are a supplier of livestock and poultry younglings, for 25% - a source of funds enabling them to purchase fuels, chemicals, etc. for maintaining production process in their farms.

Given that the basic question of HFs' sustainability is the appraisal of their development perspectives. Let's turn once again to the results of surveys done by the Russian National Research Institute of Economics and Norms. In 1997 61% of household farmers polled intended to maintain the size of their farm as it was, 34% wanted to expand their HFs and 5% decided to cut production. In 1999 59% of HFs surveyed didn't find it necessary to expand production (Table 2).

Table 2. The self-appraisal of the HFs' development perspectives, %

Intentions of rural residents in respect of their household farms	Polls	
	1997 ?. (N=329)	1999 ?. (N=159)
1. To leave HF as it is	61,0	59,0
2. To expand HF	34,0	38,0
3. To curtail HF	5,0	3,0
4. To transfer into an individual private farm	-	-

The cited data is corroborated by the results of other studies. In 1998 in the Saratov Province only 17.4% or respondents thought that they have to

expand their HF to achieve better living standards while 14.3% did't find it possible to expand (1, p.36).

Just like 3 years ago, the HFs polled didn't intend to transfer into an individual private farm.

The apparent, in my view, trend is circumstanced not only by the above mentioned decline of labour value in HFs but also by the actual exhaustion of all capabilities for extensive production growth therein. The reserves of work time in this group of agricultural commodity producers are practically over. In the Bryansk, Moscow, Nizhny Novgorod Provinces each HF family member spends 4.2-7.4 hours a day on working there (8, p.55), in the Rostov Province - 4.3-8.0 hours a day. Within 1997-1999 the number of HF owners pointing to the high labour consumption increased 1.9 times. And this is not surprising. Not more that 10% of all agricultural works in HFs is mechanized (8, p.55). All the livestock and poultry handling is done manually.

The difficulties with HFs' input supply actually undermined the basis for expanding their production.

Now a few words about the efficiency of household farms.

The results of the study show that the profitability of studied HFs was (+) 1.9-94.2% (1997), the profitability of large farms that completed the year 1997 with a profit (22.7% of the sampling) varied from (+) 0.5% to (+) 70.7%, while the losses of the loss-making farms (77.3% of the sampling) were from (-) 9.1% to (-) 72.3%, and the profitability of the profit-making individual private farms in the steppe areas in the Northern Caucasus (57% of the sampling) in the same year was (+) 1.7-80.2%, while the loss-making individual private farms (43%) incurred losses of (-) 2.9-8.6%. Assessing the labor productivity in large and small farms, it should be noted that it is higher in large farms, both collective and private. In 1997 the labor productivity in a collective large-scale farm was 16,100 rubles/man, in individual private farms - 18,100 rubles/man, and in HFs - from 800 to 6,100 rubles/man. Thus, we can say that the efficiency of agricultural production depends not only on the physical size of a farm (land area, livestock number, etc.) but even to a greater extent on the intensity and efficiency of available resources.

It should be said in conclusion that each of the groups of agricultural commodity producers that formed in the process of economic reforms occupies its own niche in the agricultural economy structure due to its peculiar characteristics, social and economic functions.

Household farms being the most numerous group of agricultural commodity producers, nowadays perform predominantly social function and form the basis for rural community's social stability.

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Issues in the Privatization and Restructuring of Russian Agriculture: Comments on Papers

Gardner B. L.[*]

The principal papers of the conference[1] address three important subjects: (1) facts about Russian agriculture in the periods preceding and following the reform that began in 1991; (2) analysis and explanation of these facts; and (3) evaluations and recommendations stemming from the facts and analysis. While the facts speak for themselves to a considerable extent, explicit evaluation is necessary to be clear about the useful output of a conference such as this one, namely recommendations on what policies should be undertaken next by the government of Russia. The papers however contain little in the recommending vein, and there is not much explicit analysis either. In these remarks I will briefly discuss some of the factual information presented in the papers, and then go on to give my own analytical interpretation of the situation and outlook, followed by recommendations about both policy issues and further scientific work. Given the difficulty of achieving a policy consensus based on current information and opinion, it is especially important to move ahead with an agenda of economic research and analysis that will narrow down the range of uncertainty about the outcomes of policy alternatives.

Facts

The bulk of the material in all four papers is descriptive, and consists largely of data intended to quantify the facts. Data are reported from a number of sources and surveys, notably in the Pytalov rayon in Pskov region (Praust), Rostov Province (Tarasov), as well as the national data presented by Serova and by Uzun. The clear presentation of this information is itself a useful and significant achievement.

[*] Agriculture and Resource Economics University of Maryland at College Park, Professor.

[1] Praust, R.E. "Family Farms and Shadow Economy of the Russian Agrarian Sector;" Serova, Eu. "The Impact of Privatization and Farm Restructuring on the Russian Agriculture;" Tarasov, A.N. "Economic Behavior and Efficiency of Household Farms in Transitional Economy;" Uzun, V. Ya. "Privatization of Land and Farm Restructuring: Ideas, Mechanisms, Results, Problems," all as translated for the Golitsyno Conference.

Presentation of facts might be taken as not controversial enough to require comment, but there are pitfalls in these basic matters. There is a question of how one defines and classifies farms, for example, whether these are 2, 3, or more categories of farms. Perhaps more seriously there are questions of the accuracy of data, for example on the number of hectares on farms, where the reporter of the data has an incentive to mis-state the situation - in this case to under-report the cultivated area because that might lead to a lower tax bill.

The most problematical data are those that report facts about the economic situation of farms, like the profitability numbers of Serova's Figure 16 and as discussed on Tarasov's p. 7, or calculated facts like the productivity indexes in Serova's Table 12, Uzun's statement that "prices for means of production rose 5 times faster than the prices of agricultural products," and Tarasov's comparisons of production costs and returns of peasant household farms. One would particularly like to see the factual details of input costs documented: what inputs and outputs were covered and what is the period during which observations and changes took place?

The facts most central to policy issues discussed in the papers are those on the situation of households in large farms who have private plots. Their production and use of land and other inputs is often intertwined with the large farms where they work, their use of grazing land, for example. But at the same time it appears according to the discussion that they are sometimes underpaid, in both wages and enterprise output shares. But the data to pin down the real economic situation of households - both in terms of earnings and the productivity of household farming - is lacking.

Analysis

Household farming (HF) is the subject of the most ambiguous analysis in the papers. There is a sense that HF has performed a valuable function but at the same time it has no future. Presumably the valuable function is the "symbiosis" (Tarasov) between HF and failing large farms, and for the lack of a future that in order to be viable in the long term, HF enterprises would have to be so much larger than they currently are that the HF enterprises that grow would no longer be "subsidiary." It should be noted however that part-time farming is a permanent fixture of agriculture in the U.S. and many countries.

Indeed, in the 1990s the number of small part-time farms has even increased.[2] In any case, the papers do not give a sufficient analytical basis for believing that HF in some form will stop being a viable and economically important part of Russian agriculture during the foreseeable future.

The key issue in HF survival, and indeed for analysis of the future structure of Russian agriculture generally, is the net returns generated for each farmer (the value of the marginal product of labor and management). This is not the accounting of wages as presented in the Tarasov paper (equation 1), but rather the value of the output generated by the efforts of the farmer, which is derived from the efficiency of the technology used and the quality and quantity of non-labor inputs the farmer has to work with.

Four determinants of the net returns of the farmer (or net returns per worker on a large-scale cooperative farm):

1. The efficiency of the farm's (a) production and (b) marketing processes.
2. The amount and quality of nonlabor inputs (land, capital equipment, purchased materials such as fertilizer).
3. The skills and effort of the farmer or workers.
4. The size of the farm labor force.

Note that efficiency in production affects labor returns, but does not determine it. Thus, labor returns are not equivalent to total factor productivity, which is a measure of efficiency. Even if total factor productivity stays the same, labor returns can be increased by, for example, using more inputs per farm worker.

This distinction is important for discussion of a topic that is important in all 4 papers, namely economies of size in farming. I use the term economies of *size* rather than economies of *scale*. Economics of scale, in technical production economics, refers to what happens when *all* inputs are increased

[2] The 1997 U.S. Census of Agriculture counted 497,000 farms with sales of less than $2500, up from 423,000 in the 1992 Census. Moreover, the average size of US farm decreased from 491 acres (199 ha.) in 1992 to 487 acres (197 ha.) in 1997. However, the number of large farms also increased. The overall message is that U.S. farms are getting more heterogeneous. These and other data may be found at the USDA website: www.nass.usda.gov/census/census97/highlights

proportionally. If all inputs are increased 10%, and we get an output increase of more than 10%, then economies of scale exist. But this is not what the papers are discussing. They usually discuss increasing the size of the farm—more land and capital—under the control of one farmer as management unit. Efficiency gains as farms get larger in this sense can arise from any of factors 1(a), 1(b) or 2 of the above list. Only 1(a) is strictly a technical efficiency issue. 1(b) involves "pecuniary" gains such as lower input prices from increased size of purchases, or lower selling costs for increased volume of sales.

More generally, farming can yield higher labor returns *for any given size of farm* as a result of improvements in all of factors (1) to (3). Even if investment is involved, in new equipment, or the farmer's skills, this need not (though it may) go along with an increase in the farm's size in order to be profitable. It depends on the situation.

The fourth factor listed is quite different. It reflects the macroeconomic situation the farm experiences. If labor moves out of agriculture, as it has during the process of economic growth everywhere in the world, this increases non-labor inputs per farmer and increases the marginal productivity of, and hence the returns to, farm labor. A dynamic equilibrium is reached when returns to labor reach and then grow at the same rate as the returns to comparable labor in the non-farm sector. This situation has been attained only in the last two decades in the U.S. and parts of Western Europe. It will not be reached for a long time—probably decades—in the transition economies, including Russia. Nonetheless we have seen already in some East European economies the effects of higher non-farm wages on the farm labor force, which will eventually cause returns to labor in agriculture to rise. It is important to note that this rise in farm wages will occur even in the absence of overall efficiency gains, technical change, or the items in (1) to (3) above.

The indicator I have been focusing on, returns to labor in farming, is incomplete in two important respects. First, it does not determine household labor earnings if the household devotes some of its time and effort to non-farm pursuits. This is the point at which part-time farming, or off-farm work by household members other than the farmer, has to be incorporated in the analysis. And, in the policy arena this opens the door for the consideration of rural development more broadly, beyond farming. The importance of a good education for rural youth, for example, involves far more than the value of schooling in creating more efficient farmers.

A second limitation of a focus on returns to labor is that it omits the farmer's returns from land ownership—in the context of former collective farms, the share of output accruing to members apart from payment for labor. Determinants (1) to (3) affect land returns just as for labor: indeed, one can view the farmer's labor and land jointly as fixed resources, the residual return to which (value of product minus cost of purchased inputs and capital depreciation) is the net farm income to be maximized. Where the economic analysis is different for land is with respect to item (4). Cropland is specific to agriculture in a way in which labor is not. So we cannot count upon general growth in the economy to raise the returns to land as it will for labor. In this respect increased productivity and (for internationally traded products) competitiveness is essential for long-run growth in returns. Several speakers at the conference pointed to evidence that the marginal value of land is low in many parts of Russia today, principally evidence of up to 30 million hectare of cropland remaining idle. (This is one of those statistical facts, however, whose accuracy remains in question.)

Recommendations

Consider the list of recommendations that the World Bank made in 1991. The list is long and comprehensive. It covers macroeconomic stabilization, fundamental legal changes in land law, enterprise reform, international trade policy, a social safety net, price liberalization, and temporary subsidies for private farmers (to be phased out by 1995-96). After 8 years can we now say those recommendations were wrong or misguided? My opinion is that they are still good today. The problem is that while recommended initial steps were taken in several areas, most notably price liberalization, virtually none of the farm-level recommendations were effectively enacted. It is clear though—for example from the 1995-96 date mentioned above—that the World Bank greatly underestimated the difficulties facing such radical reforms.

A big weakness of the World Bank agenda, in retrospect, is that the recommendations were not prioritized or sequenced. It is hopeless to think of enacting all simultaneously, and only makes sense even conceptually if every one is essential, in the sense that if you miss enacting any one of them, you get no results from all the others.

If the goal is to increase the returns to labor and land in agriculture, and hence the standard of living of rural people, the earlier discussion suggests that if the

non-farm economy could have been placed on a firm path of growth, that would have itself been sufficient to generate some good economic results in agriculture, even if little or nothing specifically to reform agriculture was done. But of course the required non-farm economic growth did not happen.

A practical question today is the opposite: given the constraints that macro stabilization, banking reform, and land ownership laws are not going to be fully achieved soon, what policies make most sense to promote the economic development of agriculture? Analytically, this reduces to the question, again, of what policies can help increase the returns to both labor and land in agriculture and hence the standard of living in rural areas?

In this context the discussion of types of farms that the papers emphasize has one point of potentially great relevance, namely, the role of household farming (HF) on private plots by members of former collective farms. Recall the two views expressed about HF: that it is a savior of failing collective farm remnants, and that it has no future. In the later view, HF is perhaps an obstacle to the development of genuine family-scale commercial farming, and policies fostering HF should not be on the agenda. The papers do not take a stand on encouraging HF (for example by further enlarging the scope of private plots through incentives, or requirements imposed upon large-farm managements) or not. I think HF should be encouraged, given the constraints that apparently prevent enactment of land law and institutions that make a major expansion of Western style private farming infeasible or at least difficult. U.S. experience makes some version of a Homestead Act appealing, where land is turned over to farmers as private property on favorable terms. But when this form of private property is unattainable, the encouragement and enlargement of HF provides a promising nursery for development of productive family farming. It is true that many, perhaps most households in large-scale farms will never "graduate" from such a nursery, but some will and these can be the core of a commercially viable smaller-scale agriculture, ready to take up market-oriented institutions as they become available.

An alternative view expressed at the conference (although not in these papers) is that the advantages of economies of scale are so predominant that further breaking up of large farms for the purpose of growing smaller farms would create even greater inefficiencies. No one argued that the remaining large Russian farms are efficient (although it was claimed that some of them are). Nonetheless, the growth of farm size in Western market economies, and especially of very large livestock enterprises in the U.S., was seen as

evidence supporting the maintenance of Russian large-scale farms at their current size. I believe that this approach, stopping further dispersal of land to new farms, would be a most serious mistake. There are two reasons. First, it is important to realize that the successful large U.S. farms are operated by highly skilled entrepreneurs who did not start large but proved themselves at smaller-scale enterprises and grew as a result of re-investing profits and, most importantly, convincing banks and others to loan them large sums of money. This convincing is not easy, for the lenders want their money back plus interest. Second, many large farm enterprises fail. In the U.S. farm crisis of the 1980s, the largest fell furthest, and even in the 1990s bankruptcies of large farms occur, either through mismanagement or bad luck.

The Achilles' Heel of the current policy situation in Russia with respect to improving productivity and hence returns to farming on the current large-scale farms is the difficulty of getting agricultural assets out from under inefficient or otherwise failed management. In these circumstances, cessation of policies to rigorously restructure and/or dismantle the existing large farms seems a recipe for further decades of agricultural stagnation.[3]

Another issue in policy given current constraints is price policy. The Serova paper provides evidence that prices matter under current constraints. The sunflower example is telling. It is important to get further knowledge about *how much* prices matter, especially over the longer term. Could it even be that current farming institutional arrangements would work perfectly well, if only product prices were higher? It is possible, but I expect the necessary prices would be well above world prices and unsustainable from either a budgetary or efficiency viewpoint. But, perhaps a lot could be achieved by reducing marketing margins. These are said to be crushingly high, although the 4 papers did not provide or cite hard evidence on this. If high margins are a major obstacle to agricultural growth, the next question is whether they are due mainly to monopsony power of buyers or to lack of infrastructure investment, e.g., in transportation, storage, or processing? Or alternatively, perhaps much could be accomplished by reducing input prices, or increasing the availability of short-term credit to buy inputs. These issues get outside the

[3]An example cited at the conference of the gains from carrying through serious restructuring of large farms is the case of China. A smaller-scale example is Albania, where radical dismantling of collective farms occurred; and in the cross-sectional comparisons presented in Zvi Lerman's conference paper, Albania is one of the best performers.

scope of the 4 papers, but they have to be brought firmly within the scope of future agricultural policy research. Without such research there can be no basis for analytically based recommendations.

A final highly relevant policy area, not really engaged with at this conference, is rural development beyond farming. This includes education of rural youth and economic information programs comprehending farm and non-farm topics. Possibilities for expansion in food marketing is a particular area that might be promising in view of the large price margins between farm and retail that are said to exist currently.

Given the uncertainties that make the preceding recommendations tentative, a further set of recommendations is in order, on an agenda for research in the economics of Russian agriculture in transition. Components of this agenda should be:

1. Farm level production economics. Existing surveys, results from which have been reported in the 4 papers, have provided a lot of input and output data. These data should be mobilized with other available data on large farm enterprises and further survey work to provide more definitive results on input use, productivity, and economic returns for various sizes and types of farms. Tools of applied production economics, such as data envelopment analysis, as well as traditional production functions and total factor productivity indices, should be applied to these data to get as detailed a picture as possible of reasons for varying performance in efficiency and profitability.

2. Market price and margin analysis. Last year's devaluation provides an opportunity to investigate how farm-level prices respond to market shocks, including improved knowledge about the pass-through of retail prices to the farm, and the capability of the farm sector to take advantage of market opportunities. To do this, data on prices would be needed at the farm level and subsequent steps in the marketing chain. Begin by concentrating on a few major products.

3. Supply analysis. Data from (2) could be used to estimate how farm input use decisions and output produced respond to farm price changes. This knowledge will help in determining what can be accomplished under the constraints imposed by the limited scope of fundamental farming reforms that have taken place.

Principles of Successful Agrarian Reforms

Thiesenhusen W.C.[*]

I have spent a part of my career examining agrarian reforms in various parts of the world.[1] When one reviews these structural changes, an inescapable conclusion is that their form, substance, and viability depend very much upon the prevailing state-institutional pattern in the country where they are carried out. One is also struck by the fact that what worked in one country's land reform may not be possible in another. Cultures, economies, language, histories, institutions, leadership, values, educational patterns, and habits, vary a great deal in countries throughout the world despite the homogenizing forces of globalization, which favor common policies to bring about ever-increasing efficiency. While modern day globalization will force countries to eliminate inefficiencies, inter-and intra-country differences will always importantly shape how countries face agricultural sector reforms. This means that there are no tried and true recipes for how to do reforms; there is no distillation of knowledge learned in one part of the world that can be generalized intact to another.

Even so, certain lessons can be learned from reforms elsewhere. There are a few principles that seem to have been important to successful agrarian reforms and I would like to share some of them with you. In some cases these points became obvious in their omission from reforms and the reform's subsequent failure. Remember that I am referring here to non-FSU and non-Central and non-Eastern European reforms. I will not indicate which I think are most pertinent for the Russian case. It is my belief that foreigners can relate what has happened elsewhere but until they have sufficient background they should be cautious in offering concrete advice.

1. In most cases of non-FSU and CEE agrarian reforms in the 20th century individual family farms were the principal agrarian reform institution.

When communal forms were attempted, as they were in some Latin American countries, these new institutions fairly quickly dissolved into private

[*] Emeritus Professor of Agricultural and Applied Economics at the Land Tenure Center, University of Wisconsin-Madison, USA

individual properties. The usual rationale behind evolution to family farming is that the economies of scale in agriculture are not as decisive as they are, for example, in industry. Furthermore, small farms can be watched more carefully than large ones for diseases, weather-related problems, and insect plagues. Also the incentive structure in group farming promoted free riding; that is, the feeling among the membership that their contribution to production is insignificant such that they would earn the same amount whether they worked diligently or slacked off. Not surprisingly, the beneficiaries took the path of least resistance. The resulting lack of assiduous workmanship eventually resulted in rifts between households and subsequent demands for individual family properties where individual effort would count and be valued. While it is true that group farming --because of fairly even sharing of net income-- provided some member insurance against risk, bad decisions by the manager of the structure redounded through the system and hurt everyone.

A recent study by the Institute for Food and Development Policy in California and The Transnational Institute in the Netherlands shows that small farms produce anywhere between 2 and 10 times per unit area that large farms do. This simply confirms once again the inverse relationship between farm size and production per hectare that has been written about for years. In this September 1999 report, Peter Rosset claims, "In fact small farms are "multi-functional--more productive, more efficient, and contribute more to economic development than do large farms." Furthermore, he claims that communities surrounded by populous small farms have healthier economies than do communities surrounded by large mechanized farms. Moreover he shows that small farmers take better care of natural resources including reducing soil erosion and conserving bio-diversity. Small farmers are better stewards of natural resources safeguarding the future sustainability of agricultural production. Rosset cites studies done by the World Bank, the FAO, the Institute for Rural Development, the Land Tenure Center, and the United States Department of Agriculture that confirm his point. [2]

2. The best reforms included an active but limited role for government. Institutions of the state (including local decentralized institutions) were firmly in place to provide authority, responsibility and accountability .

Government land reform agencies were needed to facilitate movement between private suppliers and agrarian reform beneficiaries of fertilizers, seeds, machinery, technical help, credit and other inputs. When these inputs were not forthcoming in past land reforms, the reforms tended not to be

successful. At times government is also needed to help to link private markets with beneficiaries. Where government agencies attempted to do these things themselves in a heavy-handed manner, they tended to fail. Government has a vital role to play in agrarian reforms, but it is a supporting role. Government procedures for the establishment of land reforms are necessary but they must provide simple ways to obtain land in an accelerated manner.[3] Governments are also needed to set up or suggest the mechanisms to help resolve disputes, reconcile leadership problems, and promote titling and registration. At times government must also help to educate potential beneficiaries of reform about what reform constitutes, but this role is usually better performed by organizations of small farmers themselves who have gone through the process.

A responsible market system does not automatically appear when "correct" economic policies are enacted. Institutions are important. Furthermore, a market has to exist, as the 1999/2000 World Bank's *World Development Report* implies, within a context of globalization and localization. Stiglitz emphasizes "Globalization can be thought of as a giant wave that can either capsize countries or carry them forward on its crest. Localization creates a situation where local entities --the crew of the boat, if you will--are free to exercise individual autonomy but have incentives to work together. " Yusuf, who headed up the writing of the report adds, " For either globalization and localization to benefit development requires effective institutions or rules to facilitate coordination, to facilitate better government and to provide the basis for participation at every level.[4]

3. Successful agrarian reforms tended to carefully define property rights; that is, to title property and register it.

When the farms which agrarian reform creates have fixed and assured boundaries and there is confidence that the rule of law is firmly in place, farmers will invest knowing that they will be able to reap the benefits of their own hard work. Probably they will invest first in perennial plants, then trees, then in machinery and buildings and will quickly be conscious of practicing conservation techniques so their property can be passed on intact to a new generation. Whether the new generation--which can give the farm sector renewed vitality - elects to remain on the farm or migrate is largely dependent on whether children regard farming to be a dead end or a new opportunity. If property rights are not clear, children are more apt to leave agriculture. Also solid property rights can be the basis of a land tax. Of course, without well-

defined property rights farmers are unable to use land as collateral for receiving loans, an absolute necessity for new landholders.

Titling and registration is, of course, an early step in creating a land market. For its part, one recent study on the Russian agrarian sector claims, "Rural Russians who are rational economic actors, have very reasonable fears that if they take land they may end up losing it and/or paying some type of penalty at some later point in time. We will argue that the state of uncertainty over the long-term future, more than any peculiar cultural resistance to independent farming, explains much of the reluctance of rural households in Russia to make investments in …[their] holdings." Another fear they have is that since social services were provided previously by the kolkhozy and sovkhozy private farming may find them without them. [5]

4. In successful reforms, beneficiary farmers tend to be organized so that the post-reform institutions reflect their needs and desires and not necessarily those of the present group of landlords, managers, or directors.

If the post reform structure is one in which beneficiaries are not satisfied and is one in which they perceive others are receiving the bulk of the gains that rightfully ought to accrue to them-- or if they perceive that the system has been changed in name and not in fact-- they will be able to sabotage the new system. If the new farmers are not content with the new system, they probably perceive that they have no stake in it and that is a recipe for production and other organizational problems. For their part governments must try to be as responsive and pragmatic as they can be to grassroots pressures without compromising the integrity of the reform.[6] Top down reforms seem to be less successful than reforms that come from the grassroots or are at least strongly supported by the grassroots. [7]

5. Reforms must be accomplished in a milieu in which beneficiaries and the public at large reckon is fair and equitable in addition to one which is designed to promote efficient agricultural production .

If beneficiaries perceive that the process is infused with elements of inequity, graft, injustice, and corruption, farmer dissatisfaction may thwart the land reforms.

It is important that governments recognize how important a vital agricultural sector is to the economic health of the nation. Here in the Russian Federation

agricultural production declined by about 40 percent from 1990 to 1996. From 1992 to 1996 wheat production was off 45 percent, beef and veal were down one third, pork production dropped 39 percent and chicken production was down one half. [8] USDA claims that "the main effect of economic reform on agriculture in the transition economies has been the severe contraction of the livestock sector."[9] That means that increasing food prices nationwide cannot help but put a brake on the entire economy. Furthermore, capital that could have been used for industrial capital was used to bring in food imports instead. With severe economic crises occurring in other sectors of the economy farming and its role in economic development tends to be somewhat neglected and good data scarce. In the US, for example, it is fairly easy to obtain information on the rest of the Russian economy, but finding good information on the Russian farm sector is a much more difficult task.

6. The lack of prior management experience is not always a deterrent to economic success as a new owner.

I have heard landlords in many countries say that they are opposed to land reform because it would turn the destiny of agriculture over to a group of peasants who would make unsound, uneconomic decisions. In the East Asian land reforms, of course, the former renters and now owners had managerial experience prior to reform. They had managed their pre-reform rented property. Of course in that system many were excellent farm managers. This was not the case the workers on pre-reform latifundia in Latin America. Even so, despite the ominous warnings of landlords, new owners of small farms were quite able to make rational management decisions because they had worked in agriculture, often for a long time, and had observed how administrators and foremen did their jobs. In short, workers on Latin American large farms were not impaired in their ability to make sound management decisions.

In some cases, of course, former state and collective farm workers may not be successful farmer-managers. In this case the presence of a land market would give them a way to escape from farming without losing all of their equity in the process. In the USA farmers are constantly exposed to new techniques of farming through the extension service that links the research facilities of land grant colleges to farm people.

7. The economy as a whole had to give at least start-up assistance to new landholders.

Many land reforms failed because while a new class of owner peasants was being established by granting them land, the government turned the terms of domestic trade against agriculture taxing it severely so that what was given with one hand was, in essence, taken away by the other. Successful reforms must favor the new landowners with positive fiscal and monetary policies. For a pre-defined initial start up period the new holders will probably have to be subsidized in some manner through modest subventions in either the input or the output markets and/or by tax breaks.

Endnotes

[1] William C. Thiesenhusen (ed.), *Searching for Agrarian Reform in Latin America*, Boston, Unwin Hyman, 1989; William C. Thiesenhusen, *Broken Promises: Agrarian Reform and the Latin American Campesino*, Boulder, Westview Press, 1995; Peter Dorner and William C. Thiesenhusen, "Selected Land Reforms in East and Southeast Asia: Their Origins and Impacts, *Asian-Pacific Economic Literature*, 4 (1990) pp. 65-95; William C. Thiesenhusen, "Landed Property in Capitalist and Socialist Countries: The Russian Transition" in Gene Wunderlich (ed.), *Agricultural Landownership in Transitional Economies*, University Press of America, Inc. New York, 1995 pp. 27-53.

[2] Peter M. Rosset, "The Multiple Functions and Benefits of Small Farm Agriculture," Policy Brief Number 4, Institute for Food and Development Policy and the Transnational Institute, Prepared for "Cultivating our Futures, the FAO/Netherlands Conference on the Multifunctional Character of Agricultural and Land, 12-17 September 1999, Maastricht, the Netherlands. In Russia the agricultural sector is still primarily collective and new collective enterprises brought about by agrarian reform "look and behave much as did their predecessors, the state and collective farms." See Karen Brooks and Zvi Lerman, *Land Reform and Farm Restructuring in Russia***,** World Bank Discussion Papers, The World Bank, Washington D.C., 1994. (Quote from page 2). From 1991 to 1997 the number of unprofitable large farms in Russia has risen dramatically to about 80 percent of total. E.Serova," The Impact of Privatization and Farm Restructuring in Russian Agriculture," paper prepared for the conference on "Farm Profitability, Sustainability, and Restructuring in Russia," October 1-2, Golitzino (Moscow) Russia, p. 18.Initially, those who wanted to withdraw from the former estate and begin individual farming faced a formidable series of administrative hurdles. In time, however, these difficulties were ameliorated. The major barriers to individual farming soon became lack of capital, difficulty in obtaining inputs, and prevalence of risk. See Stephen K. Wegren, *Agriculture and the State in Soviet and Post-Soviet Russia*, University of Pittsburgh Press, 1998, pp. 150-152. An argument which claims that large-scale production has more advantages than small farms is found in

V.V. Miloserdov, "Land Relations in Russia," Ekonomika-Sel'skokhozyaistvennykh-i-Pererabatyvayushchikh-Predpriyatii, 1998, No.12 pp.11-14.

[3] Marshall I. Goldman, "Russian Economic Reforms: Crises and Cures," *Post Soviet Prospects* IV, No. 10, October 1996.

[4] My University of Wisconsin Colleague Daniel Bromley makes these points on institutions frequently. For globalization, localization, and institutional points see also World Bank, *World Development Report 1999/2000*, "Entering the 21st Century," Oxford University Press, New York, issued September 15, 1999. See also transcript of the press conference introducing the report, September 15, 1999, quotes by Joe Stiglitz and Shahid Yusuf.

[5] David J., O'Brien, Valeri V. Patsiorkovski, and Larry D. Dershem, "Rural Response to Land Reform in Russia: An Analysis of Household Land Use in Belogorod, Rostov, and Tver' Oblasts from 1991 to 1996," in Stephen K. Wegren (ed.), *Land Reform in the Former Soviet Union and Eastern Europe*, Routledge, London, 1998, p 36-37.

6 This is an especially difficult problem in the Russian Federation. See E. Serova, op.cit., pp.1-2 and 24. There has been a strong anti-individual reform bias among workers and managers in the farm sector of Russia but Serova believes that while the individual reform sector is small, its influence in the economy may grow and that means that the existing private farm sector may play catalytic role. The problem is that the private farm sector has not grown much recently as some of these farms have failed and creation of new farms has been slow. Reasons for the disparity between the speed of privatization in the industrial sector and that in agriculture are discussed in Andrew Barnes, "What's the Difference? Industrial Privatization and Agricultural Land Reform in Russia, 1990-1996," *Europe-Asia Studies* 50, No.5, July 1998, pp.843-857.

[7] See especially chapters by Solon L. Barraclough, Eduardo Baumeister, and Gerrit Huizer in Krishna B. Ghimire (ed.) *Land Reform and Peasant Livelihoods: The Social Dynamics of Rural Poverty and Agrarian Reforms in Developing Countries*, United Nations Research Institute for Social Development (UNRISD), draft, Geneva, June 1999.

[8] FAO statistics (www.FAO.org) and Stephen Wegren, ibid. p. 15. At the same time Russian consumption of meat and poultry dropped from 75 kg per capita in 1990 to 27 kg. Potatoes rose from 106 kg to 124 kg in the same period while cereals rose from 119 kg to 131 kg. John Carlson, "Russian Agriculture: A Comparative View, "Western Illinois University, November19, 1998, (wiu.edu/users/miag/facstaff/jpc/jpcpap1a.html).

[9] USDA forecasts that Russia will remain a major importer of meat, with net imports at about 2.5 million tons in 2005. Its forecast assumes slow recovery in GDP, which will increase consumer demand, and only modest productivity growth within the livestock sector. "The modest growth in productivity will not be sufficient to overcome Russia's

current comparative cost disadvantage in meat production." Russia is forecast neither to return to the large grain imports of the pre-reform period nor to become a large grain exporter. "Net grain imports by 2005 are predicted at about 2.5 million tons, the bulk being wheat." The USDA also believes that "The main way that agriculture in the transition economies can become competitive on the world market is the raising productivity, that is, getting more output from a given amount of input, which would reduce unit costs of production." OECD sets the drop in volume of agricultural production in Russia at 36 percent from 1990 and 1997. (See Andrei Kwiecinski, "The Slow Transformation of Russian Agriculture." *The OECD Observer*, No. 214, October/November 1998.

Farm Profitability, Sustainability and Restructuring in Hungary

Ferenczi T.[*]

The relative efficiency of the Hungarian agriculture among COMECON countries has not hindered its deep restructuring in the course of transition into a market economy. On the contrary, Hungary has even become the first in ranking CEE and NIS countries as to the status of agricultural reforms in mid 1997 by the World Bank (Csaki-Nash 1998, pp. 11-12). An OECD survey has also shown Hungary among the leading transition countries in eliminating the impediments to efficiency in the agri-food chain (OECD 1998, pp. 157-167).

Nevertheless, the structure of Hungarian agriculture before the transition was far from the Pareto optimum. In the last peacetime year of communism, in 1988, more than two thirds (77 per cent) of the gross production of the sector originated from state (21 per cent) and collective farms (56 per cent) farms, and only less than a quarter (23 per cent) from individual farms. The latter consisted mainly of household plots of collective farms and rural households. However, the distribution of net income was more favourable for individual farms: they accounted for more than a third (34 per cent) of the sector's incomes. For the limited share in production and income, state and collective farms utilised as much as 86 per cent of land, 86 per cent of fixed assets, and even 71 per cent of labour inputs.

Despite the allocation of resources was far from the best, an adequate co-operation developed between the three main actors of the agriculture. Individual farms emphasised labour extensive products like livestock and horticulture, and state and collective farms supplied them with fodder, young animals for fattening and other inputs. In their production they focused on land extensive products, as well as processing and marketing. This way of rather strong integration resulted in a relatively flexible adjustment to market needs. At the same time, the three main actors of the Hungarian agriculture entered into a close inter-dependence on one another.

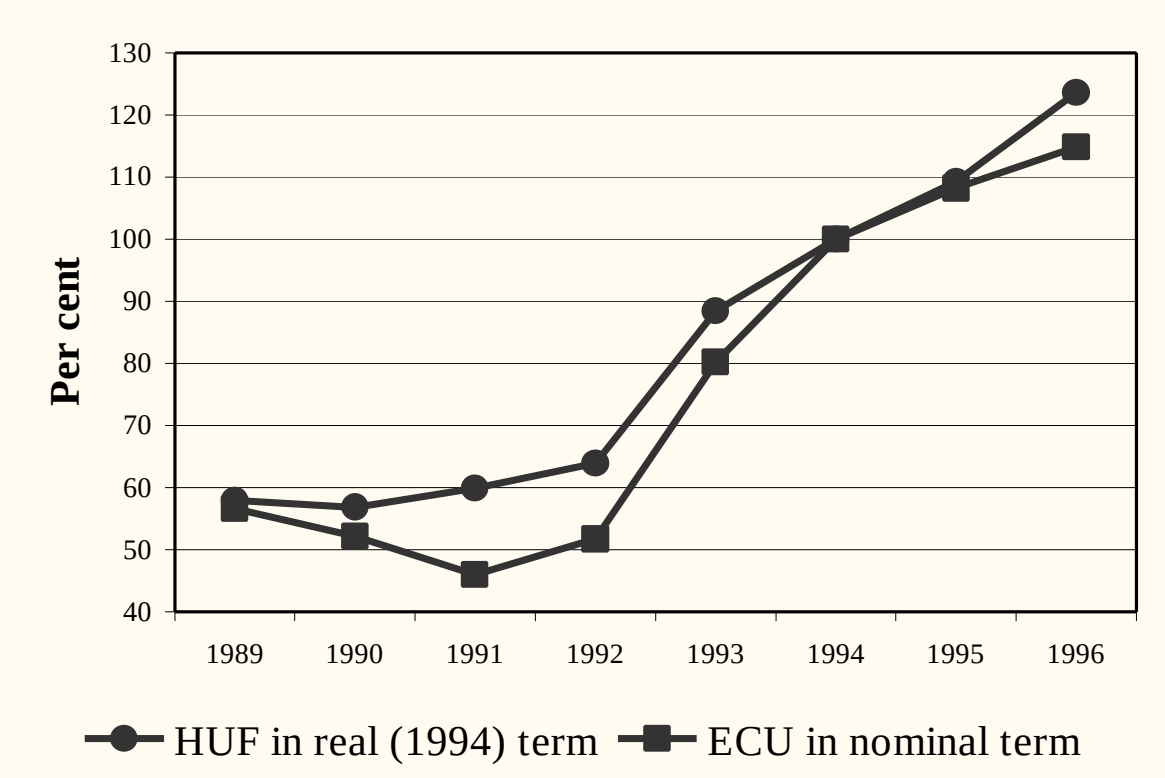
∗ Budapest University of Economic Sciences (Hungary), Professor.

Nevertheless, when the transition process started in agriculture and urged for a restructuring, the implemented policy tools necessarily changed the state of the three main interdependent actors and most integration links were suddenly broken. Due to these developments, the fall of the Hungarian agriculture, measured by Gross Agricultural Output (GAO), was the most extensive in Central and Eastern European (CEE) countries, apart from the Baltics.

Transformation and efficiency in agriculture

Hungary belongs to those transitional economies where agriculture has declined more extensively than the entire economy during the transition years. As the fall in employment was much sharper than in the output, efficiency of the sector has improved significantly during the most difficult years. The labour efficiency of the Hungarian agriculture has increased; GAO per active earners in real terms (deflated to 1994) and in ECU (nominal terms) has doubled between 1989 and 1996 (*Figure 1).*

Figure 1. Labour Efficiency (G.A.O. per active person, 1994=100)



The threefold decline in employment since 1989 was connected with the privatisation process. During privatisation, the majority of lands were

given to individuals, and state and collective farms were restructured. State farms were divided into smaller but still viable units in a legal form of business organisations (mainly limited liability companies). Collective farms had to transform themselves by the end of 1992, also to a legal form of either a business organisation or a farming co-operative. The new co-operative law of 1992 has separated employment issues from membership rights: formerly collective farms were obliged to provide their members with job and members were obliged to work for the collective farms. Consequently the number of employees in co-operatives fell from nearly half a million in 1989 to below 80 thousand persons in 1998. This great fall reflects the decreasing number of farming co-operatives and the trend of concentrating land and assets in fewer hands.

A great part of collective farms was transformed into joint stock and limited liability companies already at the start and this drive is continuing. Company forms are beneficial for the managers, as the Hungarian law on Co-operative obliges co-operatives to take the decisions on a one-member one-vote basis at the general assembly.

Individuals received land mainly in three ways. The largest area was allocated in a compensation process. Collective and state farms had to allocate the so called 'compensation lands' which were obtainable by those people who suffered political and economic injuries during the communism. On claim they received compensation vouchers which made them able to participate in land auctions up to the face value (see more details in OECD 1994, pp. 53-58).

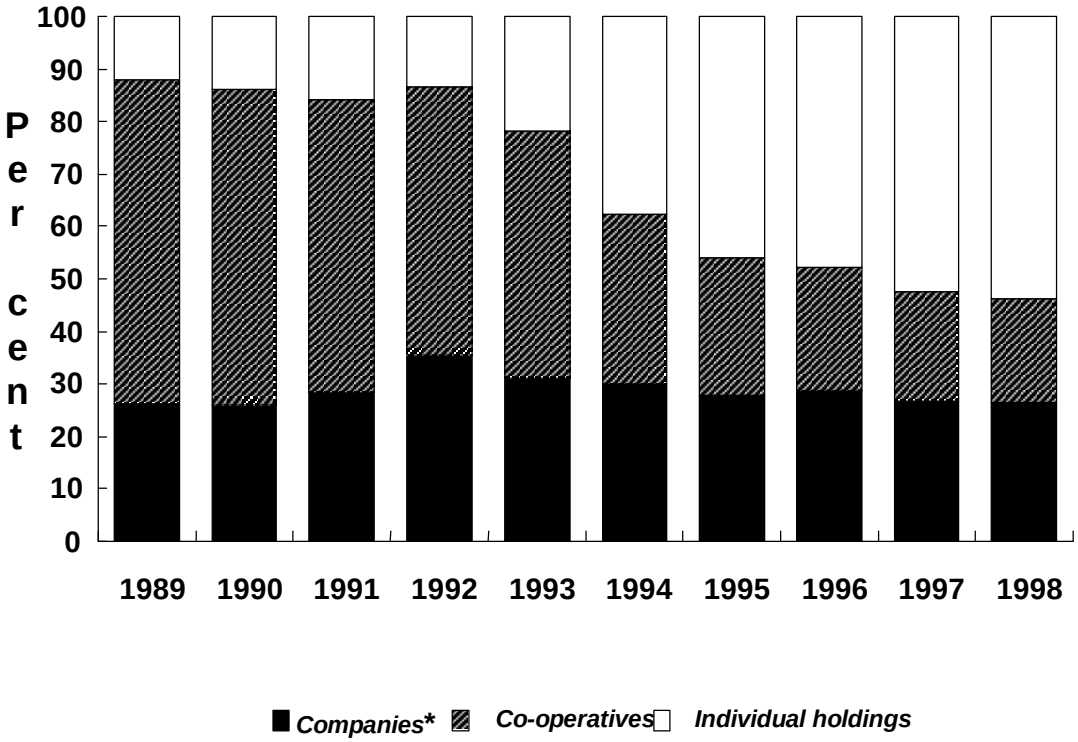
The rest of the land after compensation in co-operatives was distributed to members, up to the collectivised area, and landless members and employees were also entitled property (larger than the former household plots). In former state farms employees received similar plots. Buyers of the established limited liability companies could buy only the non-land assets, while land could be only leased. In some former state farms the government decided to maintain from 5 to 100 per cent of shares, they also have to pay the rent to the Treasury for using land.

The Land Law of 1994 made the land ownership possible only for individuals and for the State, and not for the legal entities. The share of individual ownership is about 85 per cent of the production land, while the State ownership is about 15 per cent. Foreigners, who are not permanent residents in Hungary, also are prohibited to possess farmlands in Hungary.

Individual property is limited to 300 hectares, and the ceiling of leased area is 2,500 hectares. As an exception from the mentioned rules, farming co-operatives are free to rent land from their members without limitation, above the 2,500 hectares. The leasing term can not exceed 10 years.

In the above conditions, a great structural change has taken place in the land use. Production land, which also includes forest areas on agricultural land, was shifted sharply from farming organisations to individual farms as demonstrated by *Figure 2*. Since the last year of communism in 1989, the area of individual farms expanded from 12 percent to 54 per cent in 1998. The area of farming co-operatives dramatically fell from 62 to 20 per cent in the same period. Company farms (farming organisations other than co-operatives) has stabilised their share in land use: from 26 per cent they temporarily expanded to 36 per cent in 1992, but afterwards, in a slow downturn trend they returned to 26 per cent in 1998 (HCSO 1999).

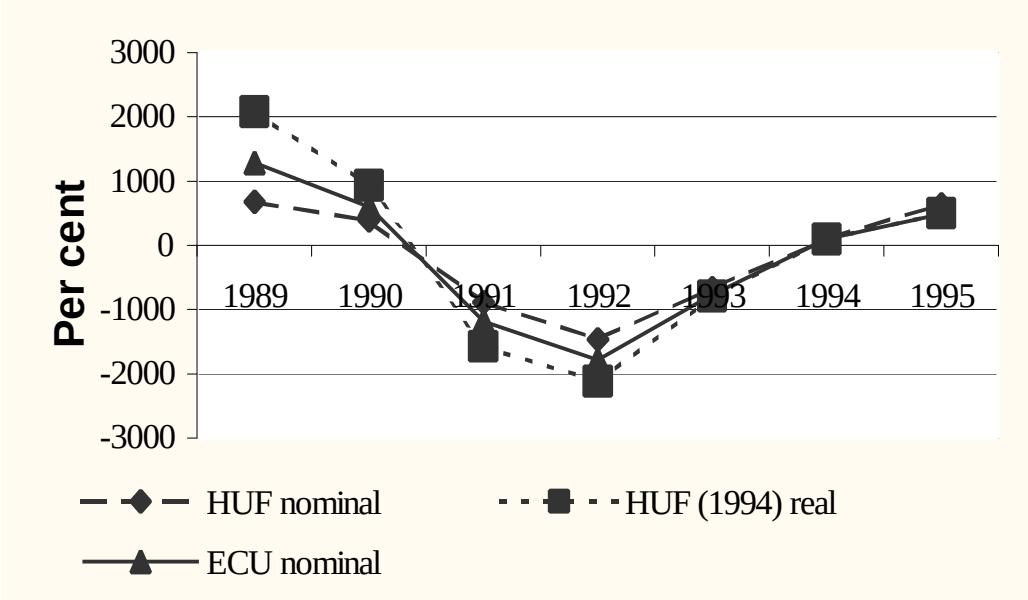
Figure 2. Composition of Total Production Land by Land Users



The transformation shocked the economic performance of farming organisations. However, after the first shock, the diminishing company sector has regained its profits. The net position was loss-making only during 3 years, from 1991 to 1994. In nominal terms, the balance of profits

and losses in 1995 has achieved the level of 1989, but not in real terms or ECU nominal terms (*Figure 3*).

Figure 3. Balance of Profits and Losses of Farming Organisations , 1994=100



After the critical years, most profit is received by medium size farming organisations with less than 300 employees. Larger organisations are far less profitable but they are not loss-making. A great part of losses is made by small organisations with less than 20 employees.

Comparing individual farms and farming organisations, we find some characteristic differences. In 1997 farming organisations were in a profit-making position. Individual farms do not show profitability if labour costs are adjusted in order to compare the two types. However, the best quarter of the sample shows similar profitability as the best quarter of farming organisations (RIIA 1999).

It evidences that a significant part of individual farms in Hungary is quite efficient, sustainable and competitive. However, there is limited information available about farm structures in Hungary. Before transition laws went into force, a survey was made in 1991. There was a census in 1994 - just two years after the transformation of collective farms had to be completed by Law. Since that only one survey was made in 1998 as a part of an international project initiated by Prof. Johan Swinnen and co-ordinated by Erik Mathijs (ACE P96-6090R). The sample of this Survey-

98 included 1600 households of individual farms and 400 farming organisations both randomly selected. Although the questionnaires of Survey-91, Census-94 and Survey-98 were different, the most important trends can be analysed on basis of their information.

Land concentration in individual farming

Individual farming in Hungary is still often considered as an inefficient, marginal and even subsistence agriculture. These opinions appear from the lack of information. However, trends disclosed by comparing Survey-91 and Census-94, indicate a clear concentration of individually farmed land. This trend continued and accelerated between Census-94 and Survey 98. The area of the smallest farms, below 1 hectare, has greatly diminished; their share fell from 20 per cent to 5. On the other hand, the largest farms, over 50 hectares, occupy 30 per cent of the total individually used lands. Their share was less than 15 per cent in Census-94, and is quite large now, only two years after the transformation. The shares of all categories of small farms, up to 10 hectares, were diminishing from 40 per cent to below 30 per cent. The share of farms from 10 to 50 hectares has doubled from 18 to 36 per cent. All this concentration took place in a period when the total individual land area expanded.

Two types of individual farms

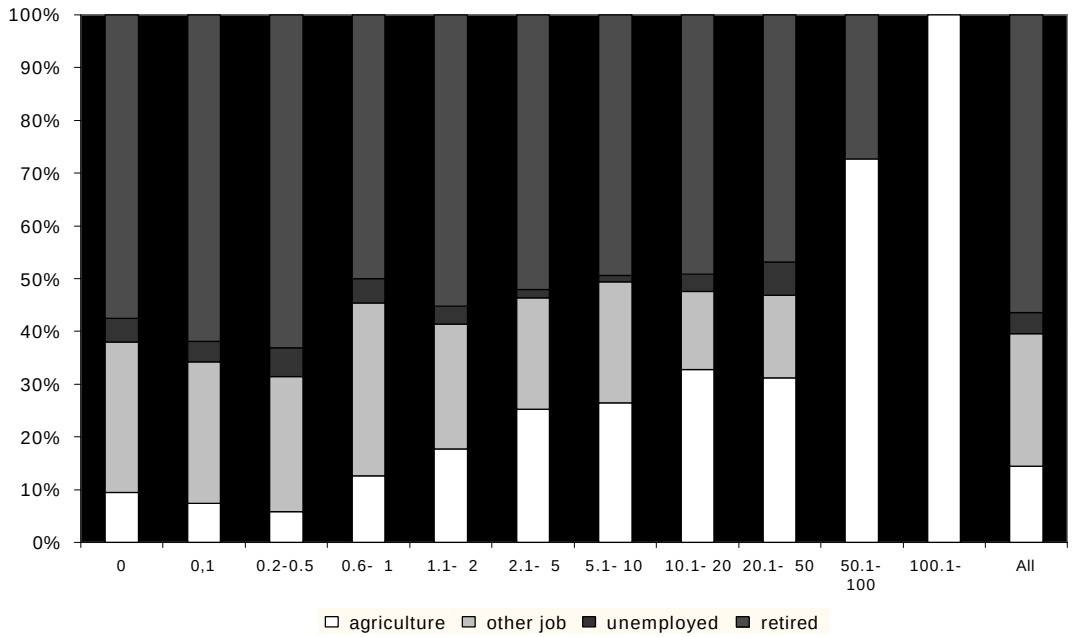
In many countries household agriculture supports unemployed families. However, in Hungary the unemployment is not typical for individual farms. It merits attention to see the composition of the primary activity of the first member of households (*Figure 4*). Less than 5 per cent of first members of households are unemployed and this share varies from 1 to 7 per cent in the farm size category up to 50 hectares. In larger farms, of course, there is no unemployment as the own farm provides a full-time occupation. The primary activity of the second member, which is not presented by figure, shows a very similar trend, unemployment is even less than 5 per cent.

In the total sample of individual farms, agriculture has only 15 per cent as primary activity, but there is a sharp upward trend in the growing farm sizes, up to 100 per cent in the largest farms. However, only 5 per cent of the second members of households have primary activity in agriculture, with a growing trend, but the maximum is only one third (in the largest farms).

A quarter of the first household members has other primary activity, but this is a reverse connection. In categories below 1 hectare from 25 to 35 per cent of the first members have the primary activity outside agriculture; in higher categories, this share is diminishing to 15 per cent. In larger than 50 hectares farms first members do not have employment outside agriculture.

It is interesting that in Hungary individual farms are not playing a significant role in unemployment, but the social factor is extremely important for retired people. They are running 55 per cent of farms, and it is notable that their share is also high (more than a quarter) in the category of farms from 50 to 100 hectares. The second member of a household is retired only in a little more than 40 per cent of the farms. The diminishing trend is more characteristic in case of the second member.

Figure 4. Composition of farms by primary activity of the first member of households



The above trends show that two main types of individual farms can be distinguished. The great majority is a typical part-time farm where household members most frequently have jobs outside agriculture. A specific sub-type of these farms is managed by retired household members. They compose a half of the sample of individual farms (representing about 600,000 farms of the total 1,200,000 individual farms in Hungary). Results show the over age of a great part of part-time farmers, and given that the

replacement by new generations will be partial, the number of individual farms is likely to decline significantly in a medium term.

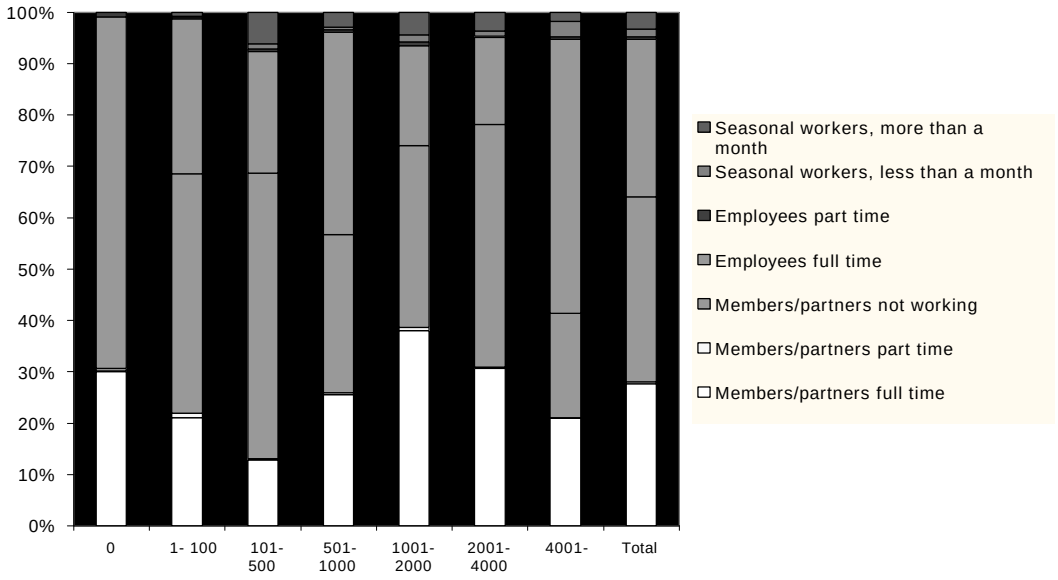
The other type of individual farms has or is acquiring a viable size. Land and other resources are concentrating in them. They are efficient and have a good perspective to improve the efficiency further to be competitive in domestic and foreign markets.

Employment issues

Only a part of individual farms is run by those operators who have the main occupation in agriculture. Evidently, some part of them has the primary activity not in the own farm but in some farming organisations. It merits attention to see the structure of labour force in enterprises. It is notable that members of co-operatives or co-owners (partners) of companies are not playing a dominant role in the labour staff. The share of full-time working members and partners is nearly 30 percent. It is notable that the share of part-time members and partners is negligible. The share of those members who do not work, is, however, very high, exceeding 35 per cent of the total staff. On the other hand, it is notable that the full-time employees constitute about the same share as the working members. Seasonal workers have a low proportion (under 5 per cent). These elements vary significantly without a trend by categories (*Figure 5*).

Employment policy of enterprises evidently gives a preference to their members and partners, and they prefer to employ them for full time. However, a larger part of members and partners are not working.

Figure 5. Employment in enterprises



Land market

Land market is an important element of the efficiency of agriculture. Land market can help inefficient sizes: unmanageable large estates can sell or lease out lands to other operators who are able to farm them more efficiently; small farms can enlarge their limited size to optimum by buying or leasing lands from other users. It follows that property and leasing markets both are very important. Mobility of the land market can improve the adjustment of the farms. In Hungary, leasing market is very lively as 85 per cent of the production land belongs to individuals, while nearly 45 per cent of land is used by farming organisations, which are not allowed to own land. Thus, they can get the land in the tenancy market.

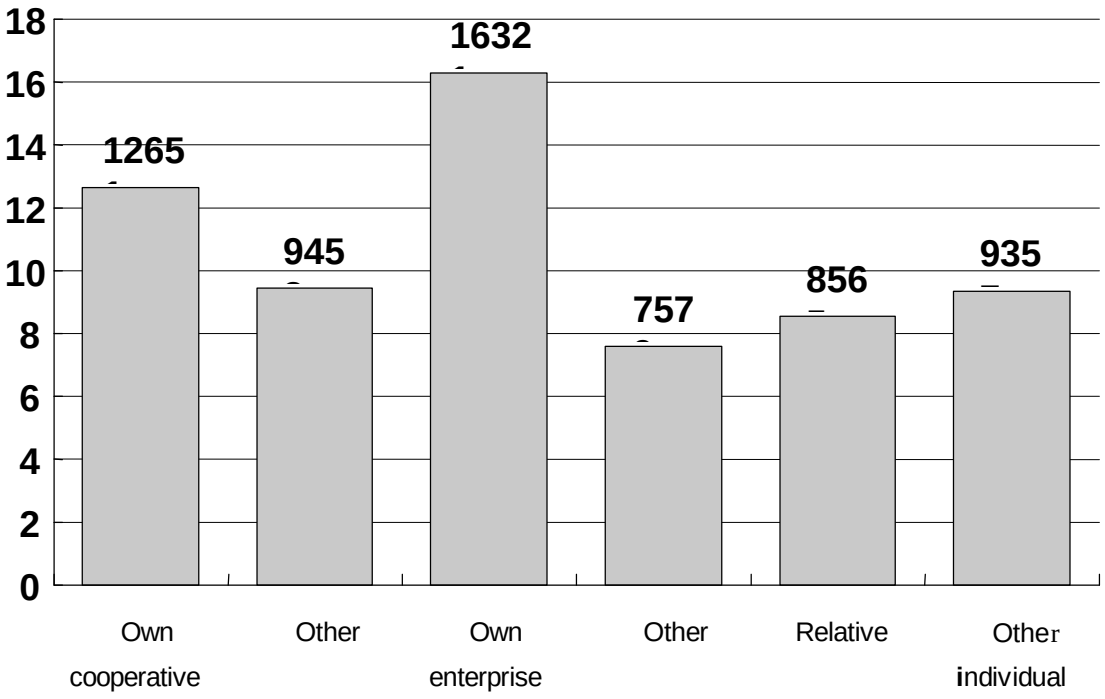
The efficiency of the tenancy market depends a lot on the legal security and barriers to the transactions.

Enterprises rely mostly on lands leased from their members or partners. The structure of rental prices by origins shows significant differences (*Figure 6*). Companies (limited liability and joint stock companies) pay far the highest rent to their partners, and these prices are followed by co-operative payments. Much lower rental prices are paid to outsiders. However, other than own co-operatives pay almost three fourth to

households, while enterprises pay far less than one half of the price they pay to their partners. This is the lowest level.

Individuals pay lower rental prices than farming organisations pay but still higher than companies pay to outsiders. Relatives also pay less than other individuals.

Figure 6. Rental Prices Received by Households (Thousand HUF/HA)



In Survey-98 households were also asked in details why did they lease their lands. The lack of labour and machinery, as well as low agricultural profitability are the most common arguments. As households have limited amounts of labour and machinery, this is the main reason why leasing is so much spread. Households are short of both inputs.

Nevertheless, individual farms are also buying lands. It is going to be more significant. In 1997, in the sources of land area for farms, purchase was important, and the average size of a land purchase was 4 hectares. As to land prices, they were stagnating at a little bit higher than 1000 ECUs, between 1993 and 1997 (RIIA 1998).

Connection between enterprises and individual farms

Survey-98 indicates the expectation from both sides for reviving connections between enterprises and individual farms. Households consider machinery service of enterprises as the most important benefit of such a connection, and input supply and selling of produce is valued only a little bit lower. The importance of machinery service is high for most categories of individual farms from the smallest to the largest. It is notable that input supply and marketing of produce were considered insignificant by the largest farms. Social benefits of membership or partnership in a co-operative or a company, seem to be much less important than before; they were considered important only by few respondents.

The relations between households and enterprises evidently turn to market criteria. Enterprises have greatly changed while adjusting to the market. This trend is emphasised by the fact that one third of the sampled enterprises was founded by individuals.

Conclusions

Probably the most surprising result of Survey-98 proves that individual farms have stabilised and made their position stronger in the period of market difficulties in lack of support. In spite of common expectations, individual farms in Hungary are far from being subsistence agriculture, which might be inspired in some other countries by rural unemployment and misery. On the contrary, the share (and role) of unemployed members is marginal in each category of farming households. Moreover, the scarcity of household labour has appeared to be the most important constraint to expand farming. Other constraints like machinery, inputs, rental prices or low profitability were considered much less important by the individual farms, including the smallest ones.

Enterprise farming has declined but still is a significant part of the Hungarian agriculture. It is rather striking that a large part, one third, of the randomly selected enterprise sample of Survey-98 was founded by individuals, and only two thirds were established by former collective and state farms. Another remarkable point of this overview is that farming co-operatives compose a weak element in the structure of Hungarian agriculture. Unless they find the demanded role in providing services (marketing, processing, storing, input supplying, etc.) for individual farms, the diminishing of their share will continue. Company forms look like

much more viable according to the results of survey, but large individual farms have advantages in efficiency.

In sum, in a short period of a few years great changes took place in the agricultural structures in Hungary. In the course of structural changes, individual farms have gained ground from enterprise farms, and at the same time larger individual farms are much more dynamic in their progress than the smaller ones. These trends will continue in the future.

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Czech Agriculture 1998: Situation and Problems

Doucha T. *

Summary

The paper describes external factors influencing the economic performance and farm structure development of the Czech agriculture since 1989. The present situation of the Czech agriculture, as a legacy of the external factors and the behaviour of farms, is analysed and illustrated from the point of view of the position of agriculture in the national economy, the utilisation of production resources and the economic performance of the sector as a whole and individual types of farms. Basic indicators measuring the competitiveness of the Czech agriculture are presented on the commodity level. To the conclusion, key problems of the present Czech agriculture are summarised. The paper utilises data from farm surveys, provided by the Research Institute of Agricultural Economics Prague, and from other studies, research projects and documents (FAO, ACE, OECD, etc.).

Introduction

The Czech farm sector has showed during the whole reform period bad economic results. The losses of many farms and their long-term continuance require a deeper insight into barriers to the necessary adjustment of farms from the point of view of their production orientation, size and legal status. One will not dispense with a back view on the recent reform history, with the aim to identify those factors, which have influenced the present situation of the Czech agriculture prevailingly.

The external factors are described in part 1. The present situation in the Czech agriculture is presented in part 2. Based on analytical information from parts 1 and 2, key problems of the present Czech agriculture are sketched in part 3.

The paper utilises data from farm surveys provided regularly by the Research Institute of Agricultural Economics, Prague, and data and information from other research studies and working documents (see References).

* Research Institute of Agricultural Economics (Czech Republic, Prague), Dr., Professor.

1. External factors influencing the development of the Czech agriculture in the reform period

There are three groups of factors which have shaped the Czech agriculture during the reform period 1989 – 1998: initial conditions 1989, general and agricultural policy framework in the reform period and quite fresh factors emerging in the last two years (1997 – 1998).

Although the influence of the initial conditions 1989 has been gradually fading out, there are still some continuing factors:

- unsettled old debts (credits) of farms from the pre-reform period (concentrated in the Consolidation Bank as a state institution);
- old large-scale technologies on farms;
- a passive reaction of a part of agricultural population to its problems, relying more on a state support than on its own activity;
- a monopolistic position of large farms in villages, influencing the competition for limited production resources (land) in localities;
- a feeling of large farms that they are destined to cover social functions in rural areas.

The general and agricultural policies in the reform period after 1989, especially the processes of property restitution, transformation and privatisation[1], have founded some problems, whose consequences have a long-term character, influencing even the present agriculture. There is particularly question of:

- the drain of capital from agriculture, which was mainly consumed, not utilised for a development in other sectors, with a positive feedback on the development in agriculture;
- the indebtedness of farms by "transformation debts": the debts represent particularly transformation shares of non-members in case of coops,

[1] The primary property transformation in agriculture had three basic forms and stages: restitution with a peak in 1991 – 1992 (restitution of both ownership rights in general and ownership titles in case of previously expropriated property), transformation of coops with a peak in 1992 – 1993 (a change from old coops to new – transformed ones, it means the distribution of "net assets" to members and non-members according to a special formula) and privatisation of the state non-land assets with a peak in 1994 – 1995 (after the period until 1993, when the state assets were leased). After the primary transformation, immediately or with a time delay, secondary transformation processes have occurred, e. g. purchasing or leasing of restituted assets to other farms, changing coops into joint stock companies, etc.

interest-free loans made to new emerging family farms in 1992 – 1993 and commitments for privatised assets from 1994 – 1995;

- the incomplete privatisation of the state agricultural land (about one quarter of agricultural land is still in the state hands), the incomplete restitution of agricultural assets and other impediments for the land market development and for a size adjustment of farms;
- the admission of international commitments in the Czech agri-food sector on a very liberal level in comparison with the situation and commitments of other countries (the EU, Poland, Hungary, etc.); there is especially question of the Czech commitments towards the WTO and the EU (European Agreement);
- the undeveloped institutional infrastructure of the society and a lower efficiency of the state administration, both weakening the position of farms on markets;
- the orientation of agricultural policy to the support of prices and production with an unbalanced approach to particular commodities; in the same time it has been a "cheap"[2] and unstable policy, not issuing sufficient incentives and signals to farms for a needed restructuring and a more effecient allocation of production[3].

In the last two years (1997 – 1998) problems of the Czech agriculture have deepened as a consequence of further external factors, particularly:

- a fall of the efficiency of the national economy, expressing itself in the decline of the GDP, in a relatively high rate of inflation (more than 10 % in 1998), in a rapid growth of unemployment and in the drop of the purchasing power of population;
- the extreme and rapid decline of prices on world agricultural markets as a consequence of the crises in South-Eastern Asia, Russia and Brazil and of the economic stagnation in developed countries;

[2] PSE indicator amounted to 10 % in 1997 and to 17 % in 1998, compared with 39 % in the EU, 17 % in USA, 10 % in Hungary and 23 % in Poland (figures related to the 1996-98 average). However, it is useful to consider that the Czech support to agriculture represents more than 1,5 % of the GDP, whilst in the EU only about 1,1 %.

[3] The reform agricultural policy is provided by the Ministry of Agriculture (subsidy policy and titles), by the State Fund of Market Regulation (intervention purchases, export subsidies), by the Support and Guarantee Farm and Forestry Fund (credit policy – guarantee and interest subsidies) and by other institutions (the Land Fund, inspection authorities and services, the Institute for Education, etc.).

- the unfavourable weather and natural conditions (floods, drought, voles).

The agricultural policy has significantly contributed to the growing problems in agriculture during the last years. Since 1994 the agricultural policy has been step by step more oriented to the development (expansion) and a flat stabilisation of the sector. The Agricultural Law was accepted in 1997 and following this act, income supports based on area payments to all farms have been applied since 1998. In the same time, direct production supports (for milk, beef, sheep, flax, etc.) have been significantly extended, without any supply regulation. The agricultural policy of the last years, oriented to the expansion of production, has got into a conflict with other external and internal factors, especially with world prices and with the state budget.

2. The present situation in the Czech agriculture

2.1. The position of agriculture in the national economy

The significance of agriculture with respect to the national economy, measured by the share of the gross value added of the primary agricultural production in the GDP, dropped further down to 1,8 % in 1998. About 4 % of workers in the national economy was employed on farms in the same year. Even though the labour productivity in agriculture absolutely and in comparison with other sectors has outstandingly increased during the reform period, it has still been lagging behind the average of the national economy. The decline of the economic weight of agriculture in the national economy is an objective process, being in compliance with developed "non-agrarian" countries. However, the share of agriculture together with the down- and upstream sectors in the GDP can be estimated up to 15 %.

The share of the agri-food commodities in the total Czech trade turnover amounted to 5,8 % in 1998. In the same year, agricultural exports represented 5 % of the total Czech exports. The similar figure for agricultural imports represented 6,6 %. The agricultural trade balance has shown a worsening trend for a longer time. The negative agricultural trade balance mildly improved in 1998, but the share of the agri-food sector in the total negative trade balance of the Czech Republic increased to 25,1 % in 1998.

The importance of agriculture as a part of rural development and a guarantee for the maintenance of the rural heritage and landscape is disproportionately higher than its economic importance and has been growing in new social conditions.

The importance of agriculture consists also in the share of households expenditures on foods (including beverages and tobacco products) in their total expenditures. Though this share dropped for the first time under 30 % (on 29,2 % in 1998), it has remained almost double in comparison with developed countries. The food price development under the conditions of declining purchasing power of population outstandingly intervenes in the possibilities of an economic development of other sectors.

In connection with the presented facts it is reasonable to stress that agriculture still remains the weakest link in the food chains and through this it contributes to the abatement of the inflation. The price development till 1993 was marked by a "general remedy" of price relations, after the price liberalisation in 1991 and the abolishment of subsidies to food consumers in 1990. Even after the radical changes in price relations during the period of 1990 – 1993 the index of farm-gate prices has been developing in a most slow way, however, the differences between the price development in particular links of the food chain have been much softer in the last years. It can be demonstrated by the comparison of price indices 1998/1993: prices of inputs 135 %; farm-gate prices 130 %; prices of food industry products 138,5 %; food retail prices 142,6 %.

2.2. Agricultural production and production resources

There are almost 4,3 mln. ha of agricultural land in the Czech Republic, of which 3,1 mln. ha are arable land. Nearly the two thirds of agricultural land are located in hilly and mountain areas with limited possibilities for agricultural production. About one fifth of agricultural land is allocated in areas under water, landscape and nature protections with restrictions for an intensive agricultural production. The share of arable land in the total acreage of agricultural land amounts to 72,4 %. This ratio is extremely high in comparison with the situation in developed countries with similar natural conditions (53 % in the EU on the average) and reflects the continuation of the pre-reform structure and allocation of agricultural production.

The impossibility to sell all the produce and at the same time the decrease of farm incomes are the main reasons for setting aside a part of agricultural land, or even for the abandonment of this land. Even though only 51 000 ha of arable land are officially registered, according to signals from several regions the reality is much more relevant. In some districts (e. g. in districts of the northern Bohemia) a substantial acreage of agricultural land is not farmed at all. The total acreage of the set-asided and abandoned agricultural land can be estimated at 100 – 200 thousand hectares. Through

this, the agricultural landscape has been (so far locally) transformed into a quite different landscape.

The further relevant process is a neglect of the care for soil quality (and of the care for other assets, of course) as a consequence of the bad economic situation of farms. The mineral balance is negative for a longer time and the quality of soil has been going down. The supply of minerals per 1 ha of agricultural land reached on the average 223 kg in 1989, whilst in 1998 only 73 kg. Even though the environmental stress on land and waters has outstandingly and positively declined, the utilisation of land as a production factor is not optimum at all. The production potential of land is utilised by about 60 – 80 %. This fact projects in yields, which are permanently lower in comparison with developed countries (the ratios of yields in the EU to yields in the Czech Republic in 1997: cereals 1,30, rape 1,21, potatoes 1,79 and sugar-beet 1,39).

Following the decline in sales and consumption, the significant decrease in numbers of animals (especially cattle and sheep) has occurred during the period of 1989 – 1998. The number of cattle has dropped by 47,6 %, of which dairy cows by 51,4 %. In comparison with 1989 the average milk yield has increased by 21,5 % in 1998, however, it has not reached the level of developed countries. A serious obstacle to improve productivity and to cut production costs in livestock production is a very unfavourable conversion ratio of feeds in comparison with developed countries.

The equipment of agriculture with the investment capital (machinery, buildings, etc.) has significantly improved, mainly as consequence of the credit supports of the state since 1994 (Guarantee Fund). According to the agricultural machinery census (provided by the Czech Statistical Office in 1999) there are nearly 80 000 tractors including small tractors (38,5 tractors/100 workers, or 23,2 tractors/1 000 ha of agricultural land, respectively) and up to 13 000 harvesting machinery (3,74 harvesters/1000 ha of agricultural land). Thousands of agricultural constructions and buildings have been reconstructed with the help of the state. From the point of view of number of machinery the Czech agriculture is roughly on the level of developed countries. Nevertheless there are several open questions in this field, especially:

- the age structure of machinery: the majority of machinery is older than 8 years (e. g. in case of tractors 88 % and as for harvesters 87 % of the total number of machinery of this category);
- an uneven equipment with machinery from the regional and the farm category points of view (better equipped with basic machinery are

individual farmers, whose average size does not guarantee an optimum utilisation especially of new machinery: individual farmers farming on about one quarter of agricultural land own e. g. 42 % of tractors, 62 % of harvesters and 64 % of sprayers in the Czech agriculture);

- attitude to environment and to animal welfare, particularly in comparison with the EU standards: a large part of cattle is so far bred in binding boxes and only a smaller part of cattle is bred on pastures, cage rearing of poultry does not comply with the EU standards, there are also extremely large concentrations of animals on farms (especially in pig and poultry breeding, on farms without land), storage of agricultural waste (manure, slurry, liquid manure) on a large number of farms is not sufficiently provided, technologies applied in the crop production do not eliminate risks of soil erosion and compression and they jeopardise biodiversity.

Old technologies are usually replaced by more efficient (and substantially more expensive) and frequently even more environmentally friendly machinery. However, under limited possibilities to get rid of the older machinery (and human operators linked with it as well), the farms are burdened rather with the increase of fixed costs than by the age structure of machinery.

The number of workers in agriculture has declined during the reform period of 1989 – 1998 by 38,7 % and amounts to 206 000 workers at present. In comparison with other sectors the worse age and educational structure of workers persists in agriculture. For example, university and high school educated workers form 23,6 % of all workers in agriculture, whilst in the national economy 39,7 %. On the contrary, the share of workers with only an elementary education amounts to 16,7 % in agriculture and 8,8 % in the national economy. Notwithstanding, purchases of new technologies stimulate a mild increase of the number of more educated workers in the last years. A specific problem is the work of women in agriculture, whose share in the total number of agricultural workers has stabilised at 35 %.

A growth of an over-employment on farms has become a very serious problem. Whilst especially during the first years of the reform agriculture could rely on a high absorption capacity of other sectors (also “thanks to” their slower restructuring), this “buffer” ability has been fading out in the last years. The position of agriculture as a “supplier” of labour turns over and agriculture has been changing into a sector, which starts to be a “buffer” for employment in rural areas with a shortage of working

opportunities, as a rule. Agricultural over-employment as the reflection of a hidden unemployment will undoubtedly be growing, in the correlation with economic problems and liquidations of firms in other sectors in district towns, etc.

In spite of the decrease of agricultural production in 1998 in comparison with 1989 by 28,2 % there is a permanent tendency of overproduction in the Czech agriculture. The surpluses of the domestic supply over the domestic demand, caused also by unsuitable policy measures and by a broader penetration of foreign foods onto the domestic market, create (especially under the conditions of low world prices) extreme pressures on export subsidies. The situation on milk, cereals, sugar markets is particularly hard at present.

Only a very small part of agricultural production is so far utilised for non-food use. There is a question especially of rape seeds: approximately one third of rape production is used for biofuel production, supported by the state.

2.3. Economic situation

The economic situation of agriculture is analysed on the sector level, on the level of farms and on the commodity level.

2.3.1. Economic performance of the sector of agricultural primary production

The view on the economic performance of the sector of primary production is given by the Economic Account for Agriculture (EAA) and its data for the period of 1996 – 1998 (see tab. 1).

Table 1. Economic Account for Agriculture (CZK mil., current prices)

Indicator	1996	1997	1998
Final agricultural production	114 149	111 407	112 41
Intermediary consumption	72 825	79 159	80 216
Gross value added at factor costs	45 159	37 004	38 701
Net value added at factor costs	33 320	26 844	28 279
Rents	1 557	1 600	1 232
Interests	4 878	5 094	4 426
Net income for all workers	26 885	20 150	22 622
- labour costs	19 798	23 131	22 784

Indicator	1996	1997	1998
- operational surplus	7 087	-2 981	-162

A rapid worsening of economic performance of the sector after 1996, demonstrated by the shift of the sector from profits to losses in 1997 and 1998, is evident from the tab. 1. This shift is caused especially by:

- the stagnation, or only a very mild increase of incomes from agricultural production (also as a consequence of the lower world prices);
- the extremely high share of intermediary consumption (purchased inputs) in the final production, especially in comparison with the same indicator in developed countries (a consequence of a substantially lower efficiency in the utilisation of inputs under the given technologies applied in agriculture);
- the relatively high labour costs, accompanied by the decrease of the net value added per farm worker (the increasing investments are not accompanied by a corresponding decline of labour);
- the lower level of supports included in the value added (especially in comparison with the situation in the EU, e. g. with compensation payments of the CAP).

As a whole it can be stated that the net value added created in the primary agricultural production does not sufficiently cover all rents paid from it (particularly labour), or does not enable to generate operational surpluses for a reasonable farm development.

2.3.2. Economic situation of farms

Until 1989 almost 100 % of land was cultivated by extremely large farms – coops and state farms. A new farm structure has emerged during the reform period and not stabilised so far. The background for the changes was created by the processes of restitution, transformation of coops and privatisation of state non-land assets. The share of particular categories of farms in agricultural land in 1998 was as follows: companies (joint stock companies, limited liability companies and others) 40,6 %, coops 34,5 %, individual farmers 23,7 % and others (state enterprises) 1,2 %. In case of individual farmers, large farms with more than 100 ha occupy 61,6 % of their land (through privatisation large private farms with 1000 – 2000 ha were established). However, the land ownership is extremely scattered (millions of Czech citizens are owners of about 75 % of agricultural area; the remainder is owned by the state and by municipalities) and the

continuation of large-scale production is conditioned by a high share of leased land on farms (on large farms up to 100 %). This fact brings higher transaction costs for adjusting the size of farms.

The economy of the farm sector and individual categories of farms is regularly (once a year) monitored by the Research Institute of Agricultural Economics in the framework of the survey collecting and processing the accountancy data of farms and all their activities (it means including non-agricultural activities on farms). The following main conclusions issue from the data of 1996 - 1998:

- The high losses of the farm sector are still continuing. About one half of farms is not profitable for a longer time. Many farms do not have resources even for a simple reproduction and this fact is reflected in their technological backwardness. An effort to reduce inputs as much as possible prevails in a large number of farms as a consequence of the shortage of operational capital. It has negative impacts on the deterioration of the soil quality and on the insufficient care for investment capital, particularly for buildings and constructions.
- Farms, especially legal entities, are outstandingly indebted (over-indebted). There are three generations of the debts: old (pre-reform) debts towards the state, "transformation" debts (debts to the state for interest-free loans and for privatised assets and transformation shares of coops as debts towards citizens – non-members) and new debts (credits through the Guarantee Fund). The majority of farms does not generate sufficient funds for re-payments of all types of the debts.
- Low financial liquidity, high indebtedness and low capital returns determine the unstable financial situation of about 70 % of farms, increasing the actual risk of their bankruptcy.
- Still incomplete restructuring of many of farms with respect to natural and market conditions negatively influences their economic performance. A large number of farms has an unsuitable structure of assets (particularly of investment assets). It sometimes concerns even the assets purchased with the state support (the Guarantee Fund), especially in coops.
- Bad economic results existing in a decisive part of farms are also caused by the over-employment on farms; on the other hand, it helps to solve the shortage of job opportunities in rural areas.

A deeper insight into the economy of farms is given by the partial economic analyses of profitable versus non-profitable farms, farms situated

in different natural conditions (production regions), different categories of farms according to their size, production orientation, etc. The following conclusions can be drawn from these analyses:

- Economic performance of farms, especially the total factor productivity, is improving with the growing size of farms. However, the break-even point changing profits from the economy of scale change into losses from the diseconomy of scale starts with the size of 2 000 – 2 500 ha.
- Only a small number of farms is approaching the frontier of an optimum utilisation of resources under the given economic conditions. Other farms are not approaching this frontier, with the majority of these farms having very long distance from the frontier. This fact quite differs from the situation in developed countries, where farms, which are not approaching the optimum frontier for a longer time, would be liquidated. It means that there are still barriers to exit from the market (liquidations, bankruptcies) in the Czech agriculture, or farms have still reserves from the past or from other unofficial sources, respectively. Last but not least it means a "living from the substance" to the detriment of the future generations (the neglect of care for resources – land, buildings, constructions, etc.).
- Economy of farms located in less favourable areas has outstandingly improved in 1998 in comparison with farms located in better natural conditions. It is undoubtedly a consequence of the direct income supports preferring less favourable regions, which were for the first time implemented in a very massive scale in 1998.

In summary and with a certain caution it can be stated that there are two factors with the most decisive influence on the economic performance of farms at present: size of farms and way of origin (establishment) of farms. The way of origin determines not only the level and the character of the indebtedness (differences between farms based on restitution, transformation or privatisation), but even a "manoeuvring room" of the managers in restructuring. From this aspect, there are differences between farms shaping their production resources in a bottom – up approach and farms shaping their production resources in a top – down approach. Larger farms are usually legal entities (coops, joint stock companies), which under the influence of many other conflicting factors (over-employment, higher fixed costs, etc.) do not fully realise effects of the economy of scale.

2.3.3. Commodity level

Data related to individual commodities (costs, prices, profitability, etc.) give a further view on the farm economy. The economic view on commodities is presented in the form of indicators derived from the OECD and the Policy Analysis Matrix methodologies, giving estimations of the level of supports and the rate of competitiveness related to the world market conditions (see tab. 2).

Table 2. The level of support and the rate of competitiveness related to commodities (1997, %, DRC = coefficient)

Commodity/Indicator	PSE	NPR	DRC	PCAC
Wheat	-1	-6,0	0,74	22
Barley	-3 (other grains)	-6,3	0,80	17
Rape seeds	-3 (oilseeds)	-12,6	0,74	10
Sugar beet	15 (sugar)	14,9	2,20	-18
Potatoes	.	19,9	0.90	40
Milk	29	22,5	1,84	-14
Beef cattle	12	12,3	1,66	-24
Pigs	-3	4,4	1,17	-2

PSE indicator (Producer Support Estimate) expresses the share of all supports, related to a commodity and issuing from the applied agricultural policy, in incomes of CZK 100 related to a commodity. NPR (Nominal Protection Rate) is a very similar indicator. Positive values of the both indicators give a signal that a commodity is efficiently supported from the side of consumers and/or taxpayers. Just on the contrary, negative values give a signal about an implicit taxation of a commodity to the benefit of consumers.

DRC coefficient (Domestic Resource Costs) expresses the level of competitiveness of a commodity related to the world market conditions. DRC values higher than 1 give a signal that a commodity is competitive and *vice versa*.

PCAC indicator (Private Costs Adjustment Coefficient) expresses the profitability of a commodity in the relation to the world market. Negative values of the indicator reflect the non-profitability of a commodity and at the same time a necessary level of the decline of unit costs of a commodity to become competitive (profitable) on the world market. Positive values

express the profitability of a commodity and a level of "reserves" for the increase of unit production costs.

With a certain caution it can be stated that the Czech agriculture is more competitive on the world market in those commodities, which are less demanding on the quality of technologies and on the quality of labour. It means commodities, in which the comparative advantages issuing from the economy of scale are much easier utilised. Unfortunately, the relations are quite opposite if we consider commodities more dependent on the quality of technologies and labour (milk, beef, root crops, etc.). In this way, one of the still existing comparative advantage of the national economy – lower price of skilled labour – is not fully realised in the Czech agriculture.

3. Key problems of the Czech agriculture

Based on the figures and on the analytical information from parts 1 and 2, key problems of the present Czech agriculture are presented in this part. The key problems are divided into two groups: problems related to the whole national economy and the national wealth, and sectoral problems. The key problems of the first group are especially as follows:

- the abandonment of land and a risk of the large-scale negative changes of the agricultural landscape;
- the neglect of the care for land as a part of the national wealth (the deterioration of soil quality);
- the continuing pollution of waters from farm activities;
- the growth of a hidden unemployment on farms linked with a risk of a gradual depopulation of rural areas.

The key problems of the second group are especially as follows:

- the lower price competitiveness of agricultural commodities;
- the indebtedness of farms;
- the continuing deterioration of the position of farmers on the market and the low liquidity of farms as a consequence of many market failures (e. g., delays in payments from the side of downstream firms);
- the threat to existence of the extremely large number of farms (a comprehensive problem).

The key problems are defined on the level of the republic. It is quite clear that the urgency of the problems differs by individual regions.

A reasonable and feasible solution of the key problems, together with other aspects of the accession in the EU, is the main task for the pre-accession agricultural policy. The policy was already discussed in the Government and is now in the process of its environmental and economic evaluations.

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A Vision for Agricultural Land Reform in Russia [*]

Prosterman R.L., Rolfes L., Jr., Duncan J. [**]

Executive summary

In Russia today many agricultural experts and policymakers are of the opinion that Russia's farm sector will remain depressed over the long term, and that large-scale farms will continue to dominate Russian agriculture for decades to come. These observers also hold the view that, to the extent there is any "restructuring" of agriculture, it will consist of transformation of the large-scale "collective" enterprise into large-scale "corporate" enterprises. Such a view is profoundly pessimistic, contemplating as it does an organization of the Russian agricultural sector that is highly unlikely to be the result of market forces, and that (as the global evidence shows) will almost ensure continuing low efficiency and low productivity.

We do not accept this pessimistic view of Russia's agriculture, and in response have tried to construct a far-reaching, but workable alternative vision of structural transformation of Russian agriculture in which the peasant farm enterprise ("family farm" or "private farm" in Western parlance) would play a more prominent role. To do this, we estimated the amount of agricultural land that would be potentially available for use on peasant farm enterprises from the present day until 2010, then estimated the potential demand for such land for use on peasant farm enterprises for the same time period given the absence of certain legal and financial constraints.

The results were encouraging. By 2010 it is quite possible that 82 million hectares of agricultural land could be in use by peasant farm enterprises (or in household production). These 82 million hectares represent close to 40 percent of Russia's total agricultural land base of 222 million hectares, and would be a vast increase over the roughly 10 percent of agricultural land currently used by peasant farm enterprises (or by household producers).

For this vision to become reality, however, key legal and financial constraints must be lifted. Regarding legal constraints, parliament-adopted federal law is needed which: decisively affirms and protects private parties' rights to sell, bequeath, lease, mortgage and use agricultural land as their

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[**] Rural Development Institute, Seattle, Washington, USA.

judgment deems best (with reasonable restrictions); privatizes additional agricultural land which is currently state-owned; and protects rights of land share owners. Regarding financial constraints, financial resources need to be made available to peasant farm enterprises for purchase of needed machinery to start-up or expand operations. The level of these resources would be significant, but could be significantly tempered by ameliorating factors.

As a final matter, despite the fact that the expansion of the peasant farm enterprise sector offers the best route for meaningful agricultural land reform in Russia, large-scale farms will continue to play a prominent role. If any meaningful restructuring of such farms from "collective" to "corporate" is to occur, three principles must be followed: the resulting entities must be much smaller than the current collectives; federal laws regulating the rights of shareholders and workers must be effectively implemented; and flexibility for further change must be preserved by providing that the resulting large-scale entities should not be able to own land, or receive long-term leases to land.

Introduction

The process of agricultural land reform in Russia has been underway for a decade. Overall the results are unsatisfactory. In the early stages of the reform process, legislation was adopted which called for: (1) the transfer of Russia's agricultural land into the ownership of its citizens; (2) the restructuring of the 26,000 collective and state farms; and (3) the creation of a significant number of peasant farm enterprises worked by single families or small groups of families (family farms) [hereinafter referred to as "PFE's"].[1] On the bright side, over half of Russia's agricultural land base has been transferred into the ownership of its citizens, largely through the land share system. However, collective farming still remains the dominant mode of agricultural production, with about ninety percent of the land farmed in such a manner.[2] PFE's cultivate only about six percent of the agricultural land, with another four percent being used in household

1 See Law of the RSFSR "On the Peasant (Farm) Enterprise" (1990); Decree of the President of the Russian Federation No. 323 "On Urgent Measures to Implement Land Reform in the RSFSR" (December 27, 1991); Resolution of the Government of the Russian Federation No. 86 "On the Procedure for Reorganization of Collective and State Farms" (December 29, 1991).

2 Much of this collectively-farmed land is actually privately owned by land share owners who have not withdrawn their land from collective use.

production. Additionally, the legal base for private ownership of land, and for development of PFE's, remains weak.

Recent discussion among agricultural experts and policymakers in Russia has distilled two widely-held conclusions: (1) large-scale farms will continue to dominate Russia's agriculture for decades to come; and (2) "lacking a clear concept of the transformation" of the Russian farming sector, that sector "will be deeply depressed for [the] long-run perspective and all small achievements of the past years of the reforms will be wasted."[3] These same observers also hold the view that, to the extent there is any "privatization" of agriculture, such privatization will consist of transformation of large-scale "collective" enterprises into large-scale "corporate" enterprises. What the difference is between these types of enterprises is unclear.

We do not accept this pessimistic view of the future of Russian agriculture, and suggest that a significant transformation of Russia's agricultural sector is realistic and potentially achievable over the period between now and the year 2010. We think the conditions exist for a voluntary, significant growth of the PFE sector. Also, while we recognize that large-scale farms will continue to play a prominent role, they can be downsized and restructured to make them more economically viable and to ensure that their workers benefit.

We will address these issues in five sections. Section I presents the international evidence showing that the PFE is the most highly efficient and productive type of agricultural producer, a truth that has recently been forgotten or ignored by many Russian experts. Section II outlines a realistic vision for the creation of substantial numbers of PFE's over the next decade. Section III indicates the needed changes in Russian law if this PFE vision is to become reality. Section IV discusses the approximate scale and application of the financing that will be needed. Finally, Section V provides a brief list of criteria for restructuring of collective farms into corporate farms to make that restructuring meaningful.

After working in the former Soviet Union and then Russia on the issue of agricultural land reform for the past nine years, and against the background of our work on this issue in seventeen other countries which are going

[3] Evgenia Serova, The Impact of Privatization and Farm Restructuring in Russian Agriculture (September 1999), p. 24 (English version) (paper on file with the Rural Development Institute).

through the transition away from a centrally planned economy, we conclude that a realistic and achievable transformation is possible over the next decade if certain legal and financial restraints are removed. Nor should this conclusion be greatly surprising. Such agrarian transformation has, after all, already largely taken place in such a relatively poor Eastern European country as Romania, in the Baltic States, and in the former Soviet republic of Kyrgyzstan.

I. The Peasant Farm Enterprise

At the present time many Russian agricultural experts do not see the PFE playing a large role in the restructuring of Russian agriculture, and do not think that the PFE should play a large role. This view is unfortunate and mistaken.

The private family farm (PFE) is the most productive and efficient type of agricultural producer in the world. For example, agriculture in the developed market economies of Western Europe, Canada, and the United States is highly productive, largely due to the fact that these economies feature private family farms as their dominant type of producer. By contrast, the huge collective and state farms, which were the hallmark of Soviet agriculture and continue to dominate agricultural production in Russia, are notoriously unproductive and inefficient. If we take the best results in average grain yields in Russia (or before that in the USSR) of around 1,700 kilograms per hectare, grain yields in far northerly agricultures such as Finland and Canada outpace Russia by ratios of 2:1 and 1.5:1, respectively, while the U.S. outpaces Russian yields by over 2.5:1, and Western Europe by 4:1.

Focusing solely on the Russian context, our organization, the Rural Development Institute, has conducted extensive field research in 17 Russian provinces throughout the 1990's. This research has consisted of extensive interviews with both peasant farmers and managers of large agricultural enterprises, and has consistently shown that established peasant farmers: work harder and more effectively; use available resources in a more efficient and prudent manner; pay higher rent to lessors of land shares; and have higher yields than nearby former collective farms.

Many commentators on Russian agriculture minimize the role that PFE's can play, for two reasons: (1) they claim that PFE's are not as efficient as large-scale corporate farms because they cannot take advantage of economies of scale in production; and (2) they claim that United States agriculture is in the process of restructuring from smaller-scale family

farms into larger-scale corporate farms, thus Russia should focus its resources and energy toward developing such farms itself. Both of these assertions are in error.

Regarding the economies of scale argument, economies of scale in agricultural production are largely presumed by the promoters of large-scale farming, but are not supported by empirical evidence. The general consensus of researchers on economies of scale is that they do not exist in agriculture, except under very special circumstances.[4] A recent study by World Bank researchers claims that "the literature contains no single example of economies of scale arising for farm sizes exceeding what one family with a medium tractor could comfortably manage."[5] By contrast, smaller farms have several natural competitive advantages, such as minimal management bureaucracy and minimal labor monitoring costs.

Viewing this issue from a different angle, most studies examining the relationship between farm size and productivity show that smaller farms are generally more productive than larger farms, that output (per unit of farmland or unit of capital invested) decreases as farm size increases. [6] For example, a World Bank study of Polish private farms found that small farms were more efficient than large farms over 20 hectares. Relative total factor productivity (TFP) was highest for farms of 10-15 hectares, but farms of 5-10 hectares and farms less than 5 hectares also showed higher TFP than farms over 20 hectares.[7]

Regarding the contention concerning the transition of U.S. agriculture to large-scale corporate farming, several factors must be considered. First, 94 percent of all farms in the United States are family farms, and these farms cultivate approximately 65 percent of agricultural land. Second, only an

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[4] Hans Binswanger & Klaus Deininger, "South African Land Policy: The Legacy of History and Current Options," in Johan van Zyl, Johann Kirsten & Hans Binswanger, eds., *Agricultural Land Reform in South Africa: Policies, Markets and Mechanisms* (1996), 64.

[5] Klaus Deininger, *Cooperatives and the Break-up of Large Mechanized Farms: Theoretical Perspectives and Empirical Evidence*," World Bank Discussion Paper 218 (November 1993).

[6] For a summary of these studies and a more comprehensive discussion of the economies of scale issue, *see* TIM HANSTAD, ARE SMALLER FARMS APPROPRIATE FOR FORMER SOVIET REPUBLICS? (Rural Development Institute Reports on Foreign Aid and Development No. 97, February 1998).

[7] Johan van Zyl, Bill R. Miller, & Andrew Parker, *Agrarian Structure in Poland: The Myth of Large-Farm Superiority*, World Bank Policy Research Working Paper 1596 (April 1996).

estimated one-fourth of one percent of U.S. farms cultivate 5,000 hectares, the typical size of a current Russian collective, and these U.S. farms only cultivate about three percent of the arable land found in the United States. In other words, 97 percent of arable land in the United States is cultivated in units smaller, and usually much smaller, than those found on Russian collectives. Third, the movement of U.S. farms towards larger sizes has chiefly been the result of the operation of the market over several generations, in which the more motivated and efficient family farmers buy out others who are less motivated and efficient, thus gradually enlarging their holdings. Thus, while it is correct to say that larger-scale corporate farming is becoming more prevalent in U.S. agriculture, family farms still dominate the agricultural landscape, and large-scale U.S. farms are generally far smaller than former Russian collectives. In short, the gradual transition to larger-scale corporate farming in the U.S. does not support the argument that farms of the massive scale found in Russia should be preserved.

II. A Vision for Creation of Peasant Farm Enterprises

At this point, roughly 10 percent of Russian agricultural land is operated outside of the cosmetically revamped collective-farming sector (almost no large-farm manager whom we have interviewed claims that there have been any real changes; nor does a recent review of the situation by one of Russia's leading agricultural economists [hereinafter referred to as the "Serova paper"] find any changes of significance).[8] Of this 10 percent, about 6 percent is land held in some 270,000 PFE's (average size 50 hectares), with another 4.5 percent being land used in household production. The question thus arises: how much land could realistically be in use by non-collectivized agricultural operations by 2010? In order to answer this question, we must estimate:

The potential supply of land available for private farming; and the potential demand for such land by private farmers.

Potential supply of land available for private farming

The potential supply of land available for private farming by 2010 can come from four main sources: existing land shares being used by former collective farms; land from the raion land redistribution funds being used by former collective farms; land used by state-owned enterprises exempt

[8] Serova, *supra* note 3.

from the land share system; and land already used by PFE's or household producers.

Land from existing land shares being used by former collective farms could be supplied from four analytically-different groups of rightholders:

First, a large supply of land will be from land shares inherited by the children of pensioners who own land shares on the large farms. Some 108 million hectares, or 49 percent of Russia's 222 million hectares of agricultural land, were transferred into private ownership through land shares in the early to mid 1990s. Roughly 40 percent of these shares went into the hands of persons who were already pensioners. By 2010, it is likely that rights to roughly three-quarters of these pensioner-owned land shares, representing about 32 million hectares, will have passed by inheritance to their children. The great majority of these children live in urban areas, not on the collective, and will be highly motivated to dispose of their land share rights—by lease or by sale—at the highest price they can obtain. Our field research indicates that PFE's are more likely to offer the highest prices than are the former collectives. These 32 million hectares represent about 30 percent of all land-share land.

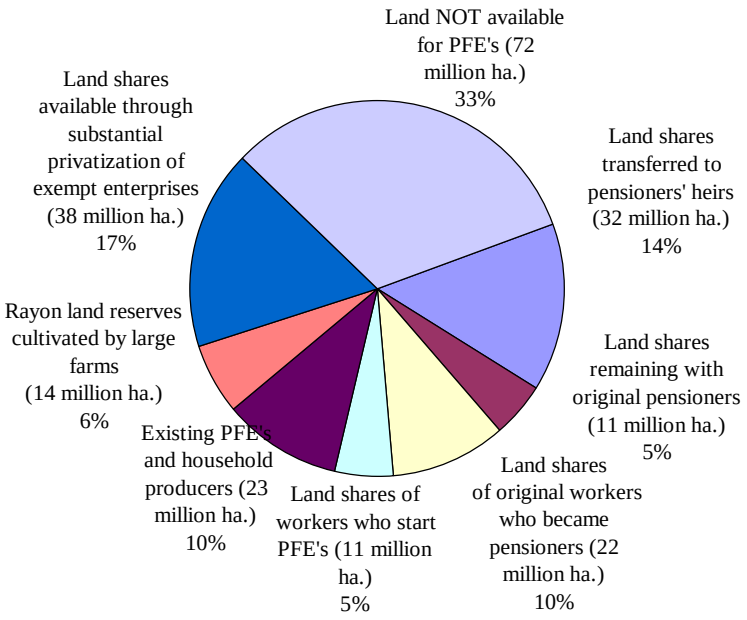
Second, the remaining one-quarter of the land shares distributed in the early to mid 1990s to persons who were already pensioners will remain in the hands of these pensioners (i.e., they will not die by 2010). These land shares represent about 11 million hectares, or 10 percent of all land share land. These pensioners will often have social and psychological reasons, and face a variety of pressures, not to transfer their land rights to PFE's outside the collective. Still, if a market in agricultural land is permitted to develop freely, increasing numbers of them will make such transfers in order to gain a substantial supplementary income beyond their meager pensions.

Third, a further roughly 20 percent of land shares (equal to about 22 million hectares) will be in the hands of persons who were not pensioners when the land shares were originally given out in the early to mid 1990s, but who will have become pensioners between that time and 2010. The same analysis applies to these as to the land shares in the previous two paragraphs, except that a smaller proportion of these land shares will have passed to the pensioners' children by 2010.

Fourth, a small proportion of non-pensioner households on the large farms may decide to leave with their land shares to start PFE's. This group represents roughly 10 percent of land shares, or the equivalent of a further

11 million hectares. This estimate is derived from the conclusions of a 1993 Agrarian Institute poll, which is presented in the discussion below on potential demand for the available supply of land.

Figure 1. Agricultural Land in Russia: Sources of Potential Supply for Peasant Farm Enterprises by 2010 (Total available is 150 million out of Russia's 222 million hectares of agricultural land)



If we add up the preceding figures—30 percent, 10 percent, 20 percent, and 10 percent of the 108 million hectares of land-share land—we reach the striking conclusion that, by 2010, up to 70 percent of the agricultural land on the large farms which is in land shares could be available for the expansion and formation of PFE's. This 70 percent represents about 76 million hectares.

The second main source of land potentially available for private farming by 2010 is the land in the raion land redistribution funds being used by former collective farms. This land amounts to roughly 14 million hectares.[9]

The third main source of land is from the exempt agricultural enterprises. Some 67 million hectares, or 30 percent of all agricultural land, is in so-

[9] *Id*. at Table 13, p. 22 (English version).

called "exempt" enterprises on which some portion of the enterprise is engaged in specialized production, thus is not included in the land-share figures above. If appropriate legal reforms (see Section III) required privatization and allocation of land-share rights for the bulk of these lands (if Eastern European experiences were followed, exempt land would amount to only 5 percent or less of land, rather than 30 percent), roughly 54 million hectares would be added to the area of land under land shares. Applying the analysis of the existing land shares to these new land shares (whose owners should have an approximately parallel age structure), roughly 70 percent of this 54 million hectares, or 38 million hectares, would be potentially available for transfer to PFE's by 2010.

The final source of land potentially available for private farm use by 2010 is, of course, the roughly 23 million hectares *already* being used by PFE's and in household production.

To sum up the amount of land that could potentially be available for use on PFE's by 2010, 76 million hectares could be available from existing land shares, 14 million hectares could be available from raion land redistribution funds, 38 million hectares could be available from "exempt" enterprises, and 23 million hectares is already being used by PFE's and on small plots. These four sources together represent over *150 million hectares* of land that could potentially be available for use by 2010, or more than two-thirds of the 222 million hectares of agricultural land in Russia. We should keep in mind that most of this does not represent simply land availability, but represents owners (especially the children of pensioners) who will be *actively seeking* the most profitable way to dispose of land rights through sale or lease.

As a final matter, the above discussion clearly shows that the organization of the Russian agricultural sector is potentially highly dynamic, and will be so for decades to come, unless the legal system and other institutions actively discriminate against the formation and expansion of the PFE sector. This conclusion arises out of the interaction of demographic and market forces described above, which will be almost inevitable unless deliberately suppressed.

Potential demand for land by private farmers

The second fundamental question when developing the vision for transformation of Russian agriculture is assessing the potential demand for land by private farmers. The potential sources of demand would appear to be in five main categories: existing PFE's; startup PFE's by land share

owners now working on large farms; PFE's started by land share owners receiving their shares through inheritance; new PFE's created from land formerly held in exempt agricultural enterprises; and household producers:

Existing PFE's have been slowly but steadily increasing their average farm size (from 42 hectares in 1992 to "more than 50 hectares" in 1998).[10] If the existing key legal and financial constraints are removed (see Sections III and IV below), it is reasonable to assume that the average size of the 270,000 existing PFE's might grow from around 50 hectares today to roughly twice that size by 2010. That is, the land cultivated by the existing PFE's would grow from 14 million to 28 million hectares, or from 6 percent of agricultural land today to roughly 12 percent of agricultural land (at 100 hectares these PFE's would still have reached only half the average size of family farms in the U.S.).

Many collective-farm households may have an active interest in establishing their own PFE's. A 1,000-household survey done in January 1993 by the Agrarian Institute suggested that on the collectives there existed a potential group that had an active interest in starting such farms themselves. While this potential group was only a small minority of collective-farm members, perhaps 600,000 out of the roughly 6 million households that own land shares, it is still significant. Again, assuming the removal of the key legal and financial constraints discussed in Sections III and IV, this interest in starting PFE's might reawaken and be reflected in the creation of a steady stream of new PFE's between now and 2010. If we assume that a number of households roughly equivalent to the 600,000 households projected from the January 1993 survey minus the roughly 100,000 who actually started PFE's after the date of the survey are affected, 500,000 new PFE's would be formed by this group by 2010. If we then assume that the average size of these new farms is only half the size we have projected the present PFE's to achieve by 2010 (50 hectares instead of 100) those new farms would occupy about 25 million hectares in 2010, or about 11 percent of agricultural land.

The preceding estimate on creation of new PFE's does not include creation that will take place on the 38 million hectares of land of exempt enterprises that should be included in the land share system, and that is potentially available for transfer to PFE's. Applying the analysis used in the preceding estimate to this exempt land, we would project demand for about 250,000

[10] *Id*. at Table 5 and p. 10 (English version).

additional new PFE's averaging 50 hectares each (occupying a total of 12.5 million hectares).[11] This represents a further 5.5 percent of agricultural land.

Some people inheriting land from original land-share owners who were pensioners might decide to farm that land directly. We projected above that these heirs, living mostly in the cities, would dispose of about 30 percent of all land-share land (around 32 million hectares) between now and 2010. Also, there will be heirs of pensioners who have received land shares from land on large enterprises presently exempt from privatization, which will amount to roughly 16 million hectares. Again assuming the removal of the key legal and financial constraints discussed in Sections III and IV, it does not seem unreasonable to project that about 10 percent of this total of 48 million hectares of land (5 million hectares) will be farmed by the heirs themselves or by other city dwellers to whom the heirs transfer their rights. This projection is supported by the strong participation of city dwellers in the very first wave of PFE formation in the early 1990s, and by the experience of such countries as Romania, where the rights of city dwellers to own and work a family farm were clearly available. This total of 5 million hectares would be a further 2 percent of agricultural land.

Finally, some household producers might be interested in expansion of their plots. Here, we conservatively project only a nominal growth in the household plot sector, say from 4.5 percent of agricultural land today to 5 percent by 2010, or 11 million hectares.

The above projections are summarized in the following table:

Table 1. Current and Future Estimated Percentages of Agricultural Land Operated by PFE's or in Household Production

	1999	2010
(1) household production	4.5	5
(2) 270,000 existing PFE's	6	12
(3) 500,000 start-up PFE's	0	11
(4) 250,000 further start-up PFE's (on	0	5.5

[11] Since the land available and the estimated agricultural population on these heretofore "exempt" enterprises is approximately one-half that on the enterprises that had previously established land shares, we project a proportionate potential demand, which amounts to a demand by roughly 250,000 households on these enterprises versus 500,000 on the enterprises that had previously established land shares.

formerly exempt land)		
(5) inherited land operated by heirs themselves or by other city dwellers	0	2
Total	10.5% (23 million hectares)	35.5% (82 million hectares)

This potential demand for land of 82 million hectares which the 2010 figure represents can easily be met by the 150 million hectare pool of land potentially available for use in the private sector which we calculated above. Thus, it is reasonable to project that close to two-fifths of Russian agricultural land might be voluntarily shifted to PFE operation (plus household production) by 2010. This can happen, however, only with the enabling changes discussed in Sections III and IV below. But if it *does* happen, with such a substantial PFE sector in existence and competing with the large farms, and with the remaining 68 million out of 150 million hectares still available for shift by its owners away from use by the large farms, further break-up of the large-farm sector should rapidly occur.

III. Needed Legal Measures to Realize the Vision

Several legal measures are needed to lay the basis for a free market in land, the mechanism through which millions of Russian citizens can start PFE's, or alienate their land to PFE's, as described in Section II.

As an initial matter, some commentators have offered the opinion that the federal body of "legislation" concerning agricultural land is quite liberal, yet land market development is much delayed.[12] The implication of this opinion is that the law is already well developed.

Technically it is correct that federal land "legislation"—a term that encompasses presidential decrees as well as federal laws adopted after passage by the Duma and the Federation Council—is "quite liberal." In particular, Presidential Decree No. 1767 of October 1993, and Decree No. 337 of March 1996 allow private ownership for both agricultural and non-agricultural land, and of agricultural land shares, with the right to buy, sell and carry out the other transactions which are, around the world, associated with the concept of "ownership".[13] The right of disposition of

[12] Serova, *supra* note 3, p. 21 (English version).

[13] Decree of the President of the Russian Federation No. 1767 "On Regulation of Land Relations and Development of Agrarian Reform in Russia" (October 27, 1993); Decree

land is also provided for in Article 36 of the Constitution of the Russian Federation.

However, it is consistently clear from our farm-level interviews with land share owners, peasant farmers, large enterprise managers, and local officials that the absence of a federal law passed by both houses of the Federal Assembly and approved by the President that expressly affirms these rights, as well as dealing with other key legal issues of agricultural transformation, severely limits most transactions in agricultural land. This has been emphatically underlined for most potential participants in land transactions by the fact that the draft "Land Code of the Russian Federation," which has been on the verge of adoption by the Federal Assembly for the past three years (and has indeed been passed by both houses but successfully vetoed by President Yeltsin), either forbids or highly restricts most transactions in agricultural land (as well placing severe obstacles in the way of most structural transformation in agriculture). Potential participants in land transactions fear, quite reasonably, that transactions that are legal under existing presidential decrees would become impermissible under a new Land Code once it is adopted.

The only sector in which a nearly normal market in land is functioning in Russia is the small plots (household auxiliary plots, dacha plots, garden plots) which have been "owned" in the full sense for more than six years. A law adopted by the Russian parliament in late 1992, complemented by a regulation on how to actually carry out such sales issued in May 1993, have given potential buyers and sellers high confidence in the legality of such transactions.[14] All or virtually all of the 265,689 "sales-purchases" transactions in 1997 (and 218,759 in 1996) shown in Dr. Serova's Table 11 are sales of small plots permitted under this specific federal law and implementing regulation. Relative to a total universe of about 40 million such small plots, this sales turnover—about 2/3 of 1 percent in 1997—is modest, but not negligible.

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of the President of the Russian Federation "On Realization of Citizens' Constitutional Rights to Land" (March 7, 1996).

[14] Law of the Russian Federation "On the Right of Citizens of the Russian Federation to the Private Ownership of Land Plots and to the Sale Thereof for Conducting Personal Subsidiary and Dacha Farming, for Gardening and Individual Housing Construction" (December 23, 1992); Resolution of the Government of the Russian Federation No. 503 "On Regulations of Purchase and Sale of Land Plots by Citizens of the Russian Federation" (May 30, 1993).

The transformation envisioned in Section II above will require a series of changes in Russian law:

The fear of a regressive federal law on agricultural land must be definitively removed. Thus, *a progressive federal law* must be adopted by the State Duma and Federation Council which is acceptable to and signed by the President, embodying key rights. This federal law could be a redrafted and progressive Land Code, a more limited Land Law, or a law covering agricultural-land issues (such as briefly envisioned in the *Protokol* of December 1997 agreed to by President Yeltsin and legislative leaders).

Turning to specifics, federal law must clarify and simplify the *right to withdraw land in kind*, whether by the owner of the land share or one who has purchased or leased the land share from the owner. Presently there is too much ambiguity and complexity, with a significant likelihood that land of average quality and reasonable location will not be allocated, or will be allocated only after extensive argument or even litigation. Restriction of land allocation for PFE's to a "massif" chosen by the enterprise can further reduce the chance of getting land of reasonable quality and location. (A regulation adopted by the Land Committee in Vladimir *Oblast* points the way to a quick and highly simplified process of land allocation). A clear ability to get land out of the large farms easily is crucial to the transformation envisioned in Section II.

A parallel point is that the land area in "exempt enterprises" must be drastically reduced. Here land withdrawal is presently not merely difficult but impossible. About 30 percent of agricultural land has been in enterprises that were totally exempted from allocation or withdrawal of land shares because some part (sometimes a very small part) of their operation was in "exempt" activities such as "elite seed breeding." Eastern European experiences in administering similar exemptions indicate that far less than 5 percent of agricultural land, and perhaps only 1 or 2 percent, should need to be considered "exempt" if such an exemption is reasonably formulated and applied.

Federal law should not permit any *irreversible contributions* of agricultural land or land shares to the large-farm enterprise (whether the enterprise is a joint stock company, a production cooperative, still a collective farm, or in some other legal form).

Federal law should ensure that the documentation and registration of *inheritance of land rights* is made simple and inexpensive. Apparently

only 158,512 "successions" (inheritances), with an average size of less than one-third hectare each, were formally registered in 1997 (and 132,171 in 1996, averaging closer to one hectare each).[15] Nearly all of these formalized inheritances are of small plots. Of particular importance to the transformation envisioned in Section II is that virtually no inheritances of land shares, which are the likely principal source of land for new and expanded family farms, are being formally documented and registered. Federal law should also reiterate (and the reiteration be widely publicized) that land shares, like any other valuable things owned by the deceased person, pass by inheritance to the children or other heirs of that person, whether or not the heirs live on the farm or in the city. Many collective-farm managers currently attempt to assert the contrary position, leading to additional delay, expense and discouragement for the heir attempting to claim his or her rights to the land share or to sell or lease out those rights.

The *right to buy and sell* both land plots and land shares must be clearly proclaimed in federal law. Much of the transformation envisioned in Section I is dependent on the assurance of a clear legal right to buy additional land plots or land shares in private transactions, an assurance that does not presently exist. This does not mean that reasonable restrictions on this right cannot be adopted as part of such federal law. Such restrictions might include prohibition on foreign ownership of agricultural land (present in the laws of several American states), restrictions on change from agricultural use purpose, maximum-size restrictions, requirements that banks cannot own land (beyond that needed for their offices) for more than a short period of time, or sliding-scale "capital gains" taxes that would heavily tax profits from early resale of land after its acquisition. All of these reasonable limitations are present in the laws of some or many market economies.

The *right to mortgage* agricultural land plots and land shares must likewise be clearly provided in federal law. In nearly all market economies, the principal method of financing sales of land is through the purchaser borrowing most of the money needed to purchase the land, and giving a mortgage on that land to the bank as security for the loan. At present, the Law "On Mortgage (Pledge of Immovable Property)" prohibits mortgage of agricultural land, and few sales involving agricultural land of any significant size or value will take place until that prohibition is

[15] Serova, *supra* note 3, Table 11

reversed. In the absence of mortgage financing, a buyer must have accumulated cash of his own to pay 100 percent of the price (except in the rare case where the seller will permit the buyer to pay for the land in installments). In the market economies, the availability of purchase money mortgage financing for land acquisitions is of vital importance to the functioning of a land market. To protect borrowers, restrictions can be put on banks' ability to take ownership of foreclosed-upon land for more than a short period of time.

Federal law must also ensure a *broad right to lease* land plots and land shares. As with potential sales of agricultural land or land shares, the overhanging threat of a Land Code with highly restrictive provisions presents a substantial impediment to private lease transactions, probably especially to longer-term leases. Here, potential private lessors and lessees are presently somewhat more willing to rely on presidential decrees than they are for sale transactions (at least when the lease arrangement is only a short-term one and does not engage large interests in reliance on the legal rules). But even here, many pensioners are probably less willing at present to lease out their land share rights to a family farmer who will pay them much more in rent, for fear that the arrangement may be or become illegal.

These legal standards whose adoption by federal law is suggested here are simply the normal rules present in the laws of market economies around the world, including the new market economies of Central and Eastern Europe. Once there is the political will, there is no special difficulty in drafting and implementing such laws.

IV. The Needed Financing for the Vision

With the changes in Russian law proposed in Section III, land for the transformation (aside from household's own land shares claimed in kind) can be acquired almost entirely through leasing in, through self-financing of land purchases, or through bank financing where the land being acquired is used as security for a purchase-money mortgage. Apart from the possibility, in the latter case, of some supplemental guarantees to lending banks at the earliest stage, few of which will be called upon, little or no public funding will be required.

In terms of the potential need for additional resources, the largest cost of the transformation by far is the cost of the needed machinery for new and expanding PFE's. If financing for this machinery were made available, the PFE's would almost certainly find the means to finance the other costs (such as inputs and building construction) without special assistance. The

point that availability of financing for machinery is the crucial factor is strongly supported by the data from the Serova paper, which shows the dramatic drop in machinery on newly established PFE's that occurred about halfway through 1993, when state-supported credits for new PFE's ran out. The year 1993, of course, was also the moment at which net new formation of PFE's dropped virtually to zero, and stayed there.[16]

While the costs for this machinery are significant in total gross terms, it should be kept in mind that there are six important ameliorating factors:

The costs will be spread over a decade of steady change, not incurred "up front" or all at once.

Most of the costs will end up being much smaller in *net* terms, since they will involve credits to PFE's which must be repaid, not grants.

The primary security for new machinery purchases is the new machinery itself.

The value added to the transformed agricultural sector will steadily increase, thereby increasing the national tax base. If we conservatively assume an average increase in production of one ton of grain per hectare (or grain equivalent) for just the arable-land portion of the 82 million hectares estimated to be transferred to the PFE sector as of 2010 (about 50 million hectares), the increased value of production would be equivalent to the value of 50 million tons of grain. At $80 per ton, this is $4.0 billion, or 96 billion 1999 rubles, a significant amount of which would be revenue which can be taxed. In the early years, most of the taxes raised by this means should be devoted to support the further transformation of the agricultural sector.

Each year some of the older equipment on the large farms becomes unusable, and very little of it is replaced. As this "decapitalization" progresses, more and more arable land will go out of cultivation entirely. If this land is to remain in cultivation, the equipment will have to be replaced anyway, thus the question is whether it will go to the large-farm/collective sector, or to a greatly expanded PFE sector as part of the process of agricultural transformation.

Finally, the unit prices for farm equipment shown below are list prices for single items. The program envisioned here would involve financing of

[16] Serova, *supra* note 3, Table 5, p. 9; Table 6, p. 11 (English version).

massive purchases over a period of years, which could almost certainly be structured so that unit costs were much lower.

How much machinery will be needed by the new and expanded PFE's projected in Section II of this report? The Serova paper provides the basis for a rough calculation.[17] We will take 1992 as representing roughly "average" equipment needs for PFE's averaging about 42 hectares in size. (Our fieldwork consistently suggests that the relatively small number of PFE's established in 1991 and earlier—49,000—tended to be atypical and overequipped, relative to their size.) We will adjust the 1992 machinery figures upward by 20 percent to roughly account for the needs of 50-hectare (versus 42-hectare) farming units. And we will assume a new-equipment need equal to that for one 50-hectare farm for each of the 270,000 "old" PFE's going from average size of 50 hectares to average size of 100 hectares under the projections of Section II, and the same new-equipment need for all of the "new" average 50-hectare PFE's projected in Section II.

The results of these assumptions are shown in the following table:

[17] *Id.*

Table 2. Additional machinery needs for PFE's whose expansion or formation is projected in Section II

Machinery	Number per 100 PFE's *(adjusted by 20 percent for 50-hectare farms)*	Number needed for 270,000 expanded farms	Number needed for 750,000 new farms[18]	Total *(rounded to nearest thousand)*
Tractors	90	243,000	675,000	918,000
Trucks	49	132,300	367,500	500,000
Grain harvesters	24	64,800	180,000	245,000
Plows	50	135,000	375,000	510,000
Seed drills	42	113,400	315,000	428,000

Current list prices for typical Russian-made equipment of these types, and projected total costs, are shown in the following table:

Table 3. Total projected costs (1999 rubles) of the needed machinery

Machinery	Unit cost (rubles)	Number of units	Total cost (rubles)
Tractors	120,000–200,000	918,000	110-184 billion
Trucks	100,000–120,000	500,000	50-60 billion
Grain harvesters	463,000–600,000	245,000	113-147 billion
Plows	10,000–30,000	510,000	5-15 billion
Seed drills	20,000–30,000	428,000	9-13 billion
Grand Total			287-419 billion

[18] We do not attempt to make a separate estimate for the relatively small numbers of new farms projected to be started by heirs directly.

This gross cost would, of course, be spread over the time period between now and 2010. Funding would "revolve," in that loans for these items of equipment can be expected to be paid off in equal installments over a period of around 5 years.

Total costs of financing new farm equipment for the 1,000,000-plus PFE's projected to expand or start up in the transformation of Russia's agricultural sector envisioned in Section II would thus be roughly 300-400 billion 1999 rubles, or the equivalent of about $12–$17 billion dollars, if we use full list prices.

To fairly assess this figure, however, we must return to the six important ameliorating factors described at the beginning of this Section. When these are taken into account, we believe it will be seen that only a fraction of this total amount (and spread over the period from now until 2010) would be needed from Russian government or foreign-aid resources to make this entire program feasible. Banks or equipment manufacturers, for example, would have repayment secured by machines worth the entire initial value of the loan. If a substantial guarantee element using public funds were added, it should make such lending virtually "loss-proof" and highly attractive for the banks, equipment-makers, or other potential private financiers. Here it should also be added that PFE's have been highly reliable in repaying even input loans (which are not secured by machinery or by land).[19]

V. Criteria for Meaningful Restructuring of Collective Farms into Corporate Farms

Based on the comparative experience, and given the clear opportunity that should arise out of the interaction of demographic and market forces described above in Section II, the development of the PFE sector offers the best route to meaningful agricultural land reform in Russia over the next decade. However, we recognize that large-scale farms will continue to play a prominent role. If any meaningful restructuring of collective farms into corporate farms is to occur, it must include at least the following three principles:

[19] Serova, *supra* note 3, Table 4 and pp. 8–9 (English version). Public financing to ensure low real interest rates will almost certainly be needed, depending on the then-existing interest and inflation rates, though techniques could be used which could reduce nominal rates considerably. However, the cost reductions obtained from the six ameliorating factors should far exceed the costs incurred from partial subsidization of interest.

1. The resulting corporate entity must be dramatically smaller in size than existing collective farms. One of the basic problems with a collective farm is its gargantuan size. If restructuring does not include reduction in size of the collective (perhaps by forming several corporate entities), then the resulting entity is highly likely to continue to be inefficient and unproductive.

2. The resulting corporate entity must adhere to the corporate law which guides its activities. Currently most former collective farms are officially some type of legal entity, usually an agricultural production cooperative, a joint-stock company, or a limited-liability company. As a practical matter, these legal entities are still largely operated as collective farms, and the legal rights of shareholders and workers are not observed. The provisions contained in the federal laws dealing with such activities must be implemented in practice, if the workers and shareholders are to have any role or stake in the operation and success of the entity.

3. The resulting corporate entity should not have long-term rights to land. It is very important that new corporate entities (or cooperative production entities) do not acquire ownership of land through contributions of land shares to their charter capital, and do not receive long-term leases of land from land share owners. If such permanent or long-term surrender of land rights occurs, then land share owners will be unable to respond to opportunities to start their own PFE's, or to lease or sell their land shares to more efficient producers, as opportunities arise.

Conclusion

When we began this exercise of crafting a vision for Russian agricultural land reform, we were unsure of where the facts or the analysis would take us. We knew from both Russian and global experience that agricultural land reform in Russia, with focus on the expansion of the peasant farm enterprise sector, is essential for both Russian agriculture and the modernization of the Russian economy as a whole, but we were uncertain (giving ourselves a time frame until 2010) whether we could reach positive conclusions as to the possibilities for such change using assumptions that seemed realistic.

We have emerged from the exercise with a strong sense of the realistic possibilities for transformation that *do* exist, as well as with considerable confidence that a detailed program to get from "here" to "there" *can* be drawn up. Meaningful land reform in Russian agriculture *can* occur, using legal and financial measures that are well within the range of feasibility.

All that is needed is the will: but sometimes the knowledge that a goal can be accomplished can generate the will to accomplish it.

Transformation Risks in the Process of Farm Privatisation and Restructuring

Krylatych E.N. [*]

Introduction

It will soon be 10 years since the beginning of the Russian agrarian reform. Both "reformers" and "reformed" feel disappointed with expectations that haven't come true. Various recently conducted sociological polls provide an evidence of that. Orthodoxes of the former system maliciously rejoice. In their view the farm collapse is an inevitable outcome of the agrarian reform.

Quite a number of analytical reports evaluating the reform's positive and negative results (prepared by the All-Russia Institute of Agrarian Problems and Informatics, Institute for Economy in Transition, RosAgroFond, etc.) appeared recently.

Unfortunately, authors of these reports do not link the problem of reforming with various risks that hadn't been duly appraised while elaborating the concept of agrarian reform and further implementing it. Though understanding the difficulty of the task, I'll take the liberty of compensating this drawback to some extent.

Does the specific type of transformation risks exist?

It's a common knowledge that risk in the economy is a threat of incurring direct financial losses or non-achieving the desired result (income, profit, etc.) due to the changes of internal and external factors entailing the deviation of the actual economic development trend from the defined goal.

The nature of banking risks is well known as well as the whole set of their apparent forms (credit, interest, rate, liquidity and many others). Entrepreneurial activity has its own set of risks: price, innovation, investment, tariff, tax, etc.

In the transitional economy rather specific types of risks emerge that can be called "transformation" or "reforming" risks. *Their source is the uncertainty*

[*] Head of the Scientific Centre of the Academy of National Economy with the RF Government, Academician of the Russian Academy of Agricultural Sciences.

(unsteadiness) of the reforming environment. There is a threat that the reform won't achieve the defined goals within the pre-set period or will achieve them at higher than anticipated social and economic costs. But even if the reform goals are achieved within appropriate period and at admissible cost, the restoration of the former system still remains probable. It should be also interpreted as an element of the transformation risk. Finally, its extreme form is getting a reform outcome which is contrary to the anticipated - e.g. production drop instead of revival, falling efficiency instead of growing one, etc.

Thus, the substantial deviation of an actual reforming trajectory from the one that leads to the goal is the essence of a transformation risk.

Goals of the Russian agrarian reform in the 90's

To identify transformation risks it's necessary to clearly define the final and intermediate reform goals as well as the criteria for evaluating its successfulness. Reform goals and the evaluation criteria are closely linked. Reform goals and instruments of their achievement are sometimes confused in publications and discussions. State land ownership privatisation and collective and state farms reforming are occasionally called the agrarian reform goal. But in fact they are no more than ways, mechanisms of achieving more profound social and economic goals of the reform.

In our view, the Russian agrarian reform goals in the 90's and the corresponding criteria of its successfulness are as follows:

1) *to achieve sustainable, economically efficient, competitive and environmentally friendly agribusiness production, capable to balance supply and existing consumer demand at acceptable (for population) prices, to provide sufficient range of food products and to build necessary food reserves. It's equal to maintaining the state's food independence and security;*
2) *to achieve rural social stability, sound employment and incomes of rural population, social security of rural families.*

In compliance with these qualitative criteria it's necessary to develop quantitative indicators compatible with similar indicators describing the situation before the reform and at different reform stages. We have to admit that neither the first nor the second goal of the agrarian reform has been achieved 10 years after its start. It's partially due to the fact that there were no

clear macroeconomic forecasts and consequently it was difficult to correctly evaluate the impact of prolonged entire system crisis on the agrarian transformations.

Marginal risk allowance

Drawing analogy with the term "marginal allowance" in ecology, we can use the term "marginal reforming risk allowance". This allowance means that the inevitable negative outcomes (production drop, growing unemployment, lower living standards, etc.) are temporary and will be virtually offset by positive outcomes within the period pre-set for fulfilling the important reform tasks. In case the integral expert estimate shows that the risk in a given reforming scheme exceeds the marginal allowance, the scheme as well as methods, time limits and probably even the original concept of reform have to be changed.

The estimation of transformation risks is necessary at the stage of elaborating the reform concept as well as at all the subsequent stages of its implementation. It can be done by skilled experts-scientists, politicians of various orientations, administrators, businessmen. The experience of All-Russia Centre of Public Opinion Studies, All-Russia Institute of Agrarian Problems and Informatics, Institute for Economy in Transition in conducting sociological polls should be utilised. The ranging of risks defined as "reforming" ones will help to more precisely correct the reform tactics, to better reflect the regional specificity.

Forms of transformation risks

Making no pretence to originality and completeness I suggest to examine only seven types of reforming risks that revealed themselves in the process of privatisation and farm restructuring.

1. The risk of legal nihilism

On the one hand, this risk is due to the low qualitative level of the reform's legal support. On the other hand, it is a result of not-knowing the legislation or of deliberate intention to evade its requirements. The legal nihilism is characteristic not only of ordinary farm workers but of managers and local administrators as well. The corresponding polls conducted by the Agrarian Institute in 1993 and 1994 showed that only 2% of collective and state farm workers polled believed that they know their rights to a land share quite well.

One third had a general idea about that and two thirds were actually ignorant. Afterwards the situation somewhat improved thanks to the President Decree ? 337 (1996) and the legal registration of land share ownership rights. But even though about 1 million land share owners have not yet got their certificates. Therefore, they are not able to execute a legally correct disposal of their land shares.

The risk of legal nihilism is also reflected in the interrelations between land share owners and farm managers. According to professor V.Ya.Uzun's data 402 thousand land shares are documented to be transferred to the authorised capital of agricultural enterprises. At the same time the de facto transfer of 1,4 million land shares is not registered de jure and this can have very serious consequences.

Administrators of agricultural enterprises do not specify in the Charters (often deliberately) all the rights of land share disposal that were established by the President Decree ? 337 in 1996. Many Charters do not include such rights as the sale of land share to outsiders, the exchange of land share for assets, land share mortgage and sometimes even the right to exchange the land share for a physical land plot.

How can one assess the damage from the risk of legal nihilism? There is a real danger that workers of agricultural enterprises and pensioners may lose a part of legal rights or incomes. Local corruption is getting ground and leads to the partial income redistribution to the benefit of the so called "elite".

The legal nihilism is sometimes intentional. In this case it's based on a fairly good knowledge of ways to evade law. For example, the Head of the Pytalov laboratory of the All-Russia Institute of Agrarian Problems and Informatics asserts that within 1999 34 individual private farmers (12% of their total number in the district) applied to the administration with the request to reregister them as household subsidiary farms although maintaining the same land area. The reason is quite understandable - they want to continue farming but to evade paying taxes. In this case the legal nihilism affects local budgets, that may lose part of incomes.

The risk of legal nihilism is reflected in the mass infringements of land legislation. In 1994 the State Land Committee and its local divisions conducted 255 thousand check-ups and revealed 167 thousand infringements - i.e. 72% of land owners and land users infringed the law. In 1995 and 1996 the scope of infringements remained at approximately the same level.

Sanctions and penalties often fail to compensate the corresponding damage to the state. The scope of infringements evidences about the real scope of risk associated with legal nihilism and its negative impact on the land reform implementation in general and on the development of efficient land use in farms being reformed.

2. The risk of inefficient adjustment to market environment

In the process of reforming a farm often gets into the risk zone following its inability to rapidly adjust to the market environment with its severe competition. Most frequently the production structure adjustment is executed in the form of avalanche reduction of livestock numbers, set-aside of arable land and other ways of cutting production costs. Reformed farms, especially financially average and weak ones, cannot restore the lost potential for a long time. Eventually they get adjusted to the market but the price for it are lost material resources, fixed assets, revenues. Some farms are virtually unable to restore the production.

From this point of view, it's interesting to analyse the Moscow oblast farm data for the period of 1996-1998. The study was done by the experts of RosAgroFond using the financial performance evaluation methodology developed in co-operation with Penza Agribusiness Information and Consulting Centre. 11 financial performance indicators of a farm were used for calculating the index of financial prosperity (IFP).

According to this index the oblast farms were divided in 5 groups. The first group - "financial prosperity", the second - "financial stability", third - "beginning of financial crisis accompanied by insolvency", fourth - "deep financial and economic crisis, enterprise is insolvent", fifth - "collapse of the farm's financial and economic system". One can suggest that farms of the first two groups succeeded in market adjustment. Farms of the last two groups fully suffered from the risks of inefficient adjustment. Farms of the third group are in a marginal situation.

The grouping enables to make some conclusions about the consequences of adjustment risks. In 1998 the average loss of a farm in the fifth group (comprising 90 farms) was 4,3 mln. roubles. The average profit of a farm in the first group (comprising 66 farms) is 3,2 mln. roubles.

Therefore, the summary gap is 7,5 mln. roubles. If we suppose that the "contribution" of the risk of inefficient adjustment is one half of this amount, the total economic loss of the 90 farms can be estimated at 337 mln. roubles.

Within three years (1996-1998) the distribution of farms among the five groups changed. The share of farms of the first group grew from 11% to 16%, of the second and third groups - dropped from 63% to 46%, of the fourth and fifth groups - increased from 16% to 38%. The insolvency risks are the highest for the fifth group farms. Their indebtedness per 1 rouble of return doubled and in 1998 reached 3,1 roubles. In the farms of the first group the increase was more modest (38%) and their indebtedness in 1998 was only 0,18 roubles per 1 rouble of returns from marketing. Outstanding debts accounted for nearly 40% of the total debts in the fifth group and for only 11% in the first group. Probably, farms of the fourth and fifth groups could have had better destiny if they went beyond formal transformations and pursued the purpose of adjusting the production structure to the market requirements. But to do so one had to evaluate the risks of inefficient adjustment and the threat of financial collapse.

3. The risk of losing farm manageability

The loss of manageability is closely connected with the inefficient market adjustment. The break of normal downstream of agricultural products to the market and back stream of money to agricultural producers rapidly affects the purchase of necessary inputs for maintaining the production process. External factors, connected with price distortions and aggressive import, increase the risks of internal non-manageability of a farm being reformed. Besides, productivity and liquidity of fixed assets declines due to their ageing and thus aggravates the problem of manageability. According to official statistics the coefficient of fixed assets renewal in agriculture is currently only 0,7 % which is several times less than in 1990. Besides, the recent revaluation of fixed assets led to their 30-60% over-estimation as compared to real market price. In some farms the difference is even bigger. According to RosAgroFond data the value of fixed assets in partnership on trust "Novosil'evskoye" in the Oryol oblast was over-estimated 1,7 times, in partnership on trust "Bol'sherechenskoye" in the same oblast - 3,6 times. This directly affects the production costs through higher depreciation. Eventually the threat of losing enterprise's manageability grows due to the uncertainty about real assets' value and costs.

Under difficult financial circumstances farm managers often hold back wage payments. Instead of cash workers often get products the marketing of which entails loss of time and lower price. Financial interests of workers are thus infringed. A way to offset wage arrears is stealing from the collective farm. Without serious material and moral motivation workers are likely to ignore the instructions of specialists and farm managers. As a result the risk of non-manageability is becoming more and more perceptible. In these conditions an inevitable production drop and aggravation of the farm's financial situation is quite expectable.

4. Insolvency and bankruptcy risks

The reforming of a farm is far from being a short way to financial prosperity. Often after having been transformed into a new organisational and legal form a farm finds itself in a difficult economic and financial situation.

In 1998 83% of agricultural enterprises operated at a loss. The total loss in agriculture amounted to 35 bln. roubles. The overall accumulated agricultural debt was 167 bln. roubles, of which 72% was outstanding. Debts of agriculture to creditors 6 times exceed debts to agriculture. The structure of agriculture's debts as of January 1, 1999 was as follows:

- payments to budget - 11,9 bln. roubles or 11,5% of all debts;
- payments to state non-budget funds - 36,6 bln. roubles or 35.5%;
- credits and loans - 11,8 bln. roubles or 11,5%;
- other debts - 10,5 bln. roubles or 10,2%.

The terms of debt restructuring announced in 1998 did not always appeal to farms. Besides, as evidenced by the poll results many farm administrators badly knew the terms and schemes of restructuring debts to various funds and budgets. As a result relatively few farms signed agreements on debts restructuring. According to the RosAgroFond data, agreements on restructuring debts to Social insurance fund were signed by 27% of farms, to Pension fund and Medical insurance fund - by only 3%, to Employment fund - by 5% of farms having respective debts.

According to some estimates up to 15-20% of farms in Russia are on the edge of insolvency and bankruptcy.

Very interesting results were obtained in the framework of project Tasic ? RF 27 "Aid to the RF Agriculture and Food Ministry in restructuring debts of agricultural enterprises". The Analytical report "Agricultural debts: problems and solutions" contains the results of polling farm administrators in Saratov oblast, Chuvashia and Colomna district of Moscow oblast. About one half of administrators polled (mainly average and strong farms) regard the bankruptcy procedure as robbery, a way to liquidate an enterprise - i.e. as a certain threat. The same number of administrators (usually average and weak farms) link the bankruptcy procedure with reorganisation and sanitation of a farm.

Despite a large number of potential bankrupts in the agrarian sector, this procedure was as yet applied to few agricultural enterprises.

According to the data of the RF Agriculture and Food Ministry 71 agricultural organisations were undergoing the bankruptcy procedure in 1998. 12 of them were at the stage of observation, 29 - at the stage of external administration, 30 - at the stage of bankruptcy proceedings.

In 1999 more detailed regional data became available in oblasts where specialists of AGRO Association work.

According to "YuzhAgroFond" in Rostov oblast bankruptcy procedure is initiated against 35 farms of which 16 are undergoing bankruptcy proceedings, 9 are externally administered and 13 are being observed.

In Nizhny Novgorod oblast according to NizhAgroFond 15 farms are undergoing bankruptcy procedure.

In Moscow oblast according to RosAgroFond bankruptcy procedure was started against 11 farms. 3 of them are externally administered, 3 undergo bankruptcy proceedings, 1 is liquidated and 2 bankruptcy proceedings are dismissed.

In Oryol oblast according to AgroMir fund bankruptcy procedure is initiated against 57 farms. 17 of them are being observed, 7 - externally administered and 33 undergo bankruptcy proceedings. It was decided to use the speeded up bankruptcy procedure against 16 farms, which means that the shares of newly formed organisations are to be sold to meet the creditors' claims.

In Volgograd oblast according to VolgoAgroFond more than 100 bankruptcy proceedings were initiated. 72 farms are externally administered, 20 are

already found bankrupt, 2 restored solvency, 4 bankruptcy proceedings were dismissed.

These facts should be regarded as a search for ways of forced reforming which could have been avoided in case the transformation risks were timely assessed.

5. The risk of spontaneous dismantle of a farm (the "pilfering" risk)

The essence of this risk is that having lost the manageability, having failed to efficiently adjust to the market, lacking external support and a possible way-out of crisis, a farm finds itself in the situation of spontaneous dismantle. The emerging chaos leads to a rapid "disappearance" of any liquid assets. Even production building are being pilfered. Their roof disappears first for the slate can be sold or used in the household, then it comes to interior partitions and remaining equipment and, finally, wall blocks and bricks are dismantled down to the basement. Legal actions based on such facts are rare and still more rare are court decisions.

6. The risk of adventurism and grabbing by farm administrators

The situation in a farm is the gravest when the risk of spontaneous dismantle is coupled with another proximate risk of grabbing and adventurism of its administrators. The latter can even provoke the farm's dismantle in order to benefit from it. There is a lot of such examples in each of the Russian Federation's oblasts.

7. The risk of social indifference and direct counteraction to reforms

The reforming of collective and state farms could be more successful in case of their active support by rural population and farm workers. However, sociological polls conducted in the first reform years showed that the rural population is rather inert and at the best will remain indifferent to changes, at the worst - will counteract them. Unfortunately, the ensuing risk was not duly assessed and eventually brought quite negative results. Many farm administrators and workers preferred to limit transformations to changing the formal form without deeply reforming the in-farm relations. Thus the transformation of collective and state farms in many regions was slow and low efficient.

In order to prove that the problem of social indifference and apprehension of the started reforms is serious, it's worth to cite the results of sociological polls conducted by the Agrarian institute in 1993 and 1994. The poll embraced 2273 persons: farm administrators and workers, individual private farmers, owners of household plots.

Question: *"How did the well-being of your family change during the last 2-3 years?"* In 1993 54% of respondents answered that it worsened, in 1994 - already 75%.

Question: "*Do you believe in the success of economic reforms currently implemented in rural areas?*" In 1993 73% of respondents answered negatively, in 1994 - 87%. The interdependence of answers to the two questions is obvious: the worsening family welfare standards during the initial years of reforms shook the faith in them of many collective and state farm workers.

The poll cleared up the orientation of agricultural enterprise workers to market transformations. In particular, they were asked to choose the preferable way of getting incomes: *either to have a small but guaranteed income or to have a large income entailing economic risk*. The second way was chosen by only 13% of respondents in 1993 and by 11% in 1994.

Question: "*What is your attitude towards the permission to buy and sell land in Russia*?" In 1993 70% of responses were negative, in 1994 - 77%. The causes of such an attitude are explained by responses to the question: "What will be the results of buying and selling land?" The following negative results were anticipated: "most peasants will find themselves without land" - 21% of respondents, "land speculation" - 34%, "land will get in hands of the ones who do not know how to handle it" - 23% .

Question: "*Do you plan to found your own peasant farm in the nearest 2-3 years?*" Only 3% of respondents were positive about that in 1993 and 2 % - in 1994.

However, some opposite trends could be noticed as well. Question: "*What is your attitude towards the existence (emergence) of private enterprises in your village?* " In 1993 43% of responses were positive, in 1994 - 47%. Question: "*Could you work as a labourer hired by an individual?*" In 1993 30% of agricultural enterprise workers polled gave positive answers, in 1994 - 33%.

The main conclusion out of these polls is that rural population, workers of collective and state farms had a vague idea of the started agrarian reform, were apprehensive about it and didn't see any positive results of its implementation in the first 2-3 years. Thus the social support of the reform in most regions was obviously insufficient. It entailed the emergence of one of the forms of reforming risks that could be called the risk of social indifference and counteraction to reforms.

Instead of a conclusion

The transformation of agrarian sector, its adjustment to the market environment will take at least ten years before stable positive results are achieved complying with the goals and criteria of agrarian reform. There is no hope left that the macroeconomic situation in the country will radically change and become more favourable and stable. Thus the problem of entailed reform risks, external and internal causes of their emergence and possible consequences remains quite relevant. There is a need for active system of managing transformation risks at all levels of the agrarian sector reforming: state (federal and regional), local, enterprise and enterprise divisions. The resolution of this task should be prioritised in the activity of a number of agri-economic research institutions.

OUTCOMES OF INSTITUTIONAL CHANGES IN RUSSIAN AGRICULTURE

(seminar closing statement, Golitsyno-99)

On 1 and 2 October, 1999 in the town of Golitsyno a group of experts in Russian agrarian economic issues held a seminar, during which the results of land privatisation and farm reorganisation as part of the agrarian reforms of the 1990s were discussed. Practical implementation of Russian agrarian reform on a national level and in a number of Russian regions in particular, as well as the experience of agrarian reforms in Eastern Europe and other foreign countries was analysed. The seminar was attended by representatives of various "schools" of economics. They jointly attempted to single out the most important institutional changes in Russian agriculture and to define the ways for future reform of the sector.

The seminar participants have come to the following **conclusions**:

I. During the last 10 years **a new agrarian structure** was being formed in Russia. This process is not over yet and its results are debatable. However, the "distance covered" so far allows some conclusions to be drawn.

I.1. Changes have taken place in the structure of agricultural gross output, land utilization and employment. The share of large agricultural enterprises has been reducing, and the share of family household plots has been growing. The State monopoly on land has ended and private land ownership is developing.

I.2. There has appeared a new type of farm business - individual private farms. The number of these farms has not yet grown to be substantial (270 thousand) and private farmers have failed to become the leading sector in agribusiness. The average private farm size (47 ha) is growing and production is concentrated at the largest of them, while smaller private farms are turned into subsidiary ones. Private farms established in the first years of reform have enjoyed government support the most and have the best business parameters now.

I.3. Personal household plots (PHPs) have been steadily developing, and their role in securing rural livelihoods and providing foodstuffs for the cities has grown. The role of PHPs is especially important in the economically disadvantaged areas.

I.4. Large farms continue to be the main producers of grain and technical crops (e.g. sunflower seeds, sugar beet, flax and other crops, which need processing). Poultry farms and other industry-related enterprises have found their market niche in the market economy environment. During reorganisation the average size of a farm enterprise has been reduced, and the type of ownership changed. The predominant types of ownership are production co-operatives (43 % of almost 27 thousand large farms), joint stock companies (20%) and limited liability companies (25%). Despite that, the majority of joint stock companies and other entities continue to operate as production co-operatives and are often controlled solely by the manager.

I.5. The main share of agricultural land has been transferred to private ownership. The needs of the population in acquiring plots for establishing households, horticulture and gardening have been met. The adopted land privatisation strategy has enabled the creation of a market of land shares and provided the transfer of land to efficient farmers. However, the rights of citizens for land ownership are infringed in many regions and at the federal level: land mortgage is prohibited, and there is no legal ground for land leasing and land marketing.

I.6. Despite major structural changes, agrarian reforms have not created a sound basis for the growth of economic efficiency in Russian agriculture. The current efficiency crisis in the agrarian sector is caused by the following:

- a lack of macro-economic stabilisation in the entire country, the disparity between prices and, related to that, unfavourable conditions for the development of agrarian sector;
- initially started, but incomplete and unfinished institutional changes (e.g. implementation of mechanisms for the use of land certificates, sale of land and so on);
- underdeveloped market infrastructure (information systems, mechanisms for financing and crediting of the Agro-Industrial Sector (AIS), regulated markets, guarantee system, etc.); regional trade barriers and interference of the regional administrations in the local markets of food and agrarian products; the irrational practice of providing government support for inefficient farms, non-existent bankruptcy mechanism for insolvent farms;
- no consensus in the society regarding the reforms;

- only partial execution of the adopted legislation by the authorities, and contradictions between federal and regional approaches to reform implementation;
- farms continue to bear the burden of social infrastructure maintenance.

II. The existing agrarian sector structure continues its evolution under the impact of the economic situation in the country. The most likely **trends in the evolution** may be:

II.1. In the near future large farms will continue to play a significant role in the development of the sector, mainly in the production of grains and technical crops. Gradually controlling interest will be concentrated with a relatively small number of owners and land will be leased from land share owners. Part of the farm enterprises will transform into co-operatives providing services for family farms.

II.2. The property of insolvent collective farm enterprises will be transferred to PHP owners, other large farm enterprises and efficient owners (private farmers, processors).

II.3. The role of commodity producing PHPs will be reduced with the economic growth and transformation of the large farms into efficient commercial farms. Some of the most market oriented PHPs may with time develop into farms.

III. Having stated the above, the members of Golitsyno group believe, that it is necessary to implement the following **measures** to promote institutional development in Russian agriculture:

- to bring the ownership type (organisational and legal form) of farm enterprises into compliance with the existing RF civil legislation, to create conditions for concentration of agricultural land and capital with the most efficient owners, and to develop holding legislation in the agrarian sphere;
- to resolve the issue of funding rural social infrastructure and to relieve farm enterprises of this expenditure;
- to secure the rights of land and property share owners, to develop the rights to lease and mortgage farm land, and to adopt legislation regulating land market;

- to introduce the "indicative" legislation defining the status of Russian agricultural producers; to systematise farm statistics and to develop the standard methodology making farm statistics suitable for analysis. (At the moment farm enterprises, private farms and personal household plot owners have different systems of reporting and provide state statistics agencies with information, which is impossible to analyse with statistical methods, as the data is not 'compatible");
- to provide the government support for AIS information system development, a system, which would allow efficient collection, processing and dissemination of data on the situation in agriculture, markets of agrarian and food products, situation with rural population, etc.;
- to draft legislation determining specifics of farm bankruptcy procedures, and to transfer agricultural land and resources to more efficient owners;
- to develop a unified agrarian policy applicable to all agricultural producers, to support agricultural producers based on government programmes, targeted not at a certain type of ownership, but at a certain size of farms, their specialisation or location;
- to develop federal and regional programmes for rural development, aimed at establishing alternative employment opportunities; with the introduction of simplified procedure for registration of small businesses and obtaining small loans;
- to modify tax legislation in order to make it flexible with regard to seasonal specifics of agricultural production;
- to provide the government support for co-operation of family farms in marketing and input procurement, processing, etc.

Participants to the seminar are aware that in order to provide growth of agricultural efficiency in the country institutional changes alone are not sufficient - stable growth is necessary in the entire economy, and the real income of the population should be increased. AIS infrastructure development and formation of the common market of food and agricultural products is required. The federal and regional policy regarding AIS is of great significance.

Participants to the Golitsyno-99 seminar

Gusenkov Anatoly V.
Kalinin Alexander A.
Kholod Leonid I.
Khramova Irina G
Krylatych Elmira N.
Linin Yury I.
Neburchilova Nina F.
Petrov Valerian A.
Petrikov Alexander V.
Poshkus Bolus I.
Praust Rudolf E.
Rodionova Galina A.
Rylko Dmitry N.
Semenov Victor A.
Serova Eugenia V.
Sizov Andrey E.
Starikov Ivan V.
Strokov Sergey N.
Tarasov Alexander N.
Uzun Vasily Ya.
Vostrukhin Konstantin A.
Yanbych Renata G.
Yastrebova Olga K.
Zlochevsky Arkady L.
Zybin Valery V.

BASIS – RUSSIA

Issues in Privatization and Restructuring of Russian Agriculture
Agricultural Policy Workshop
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Golitsino, Russia

TRIP REPORT

Richard N. Blue
Principle Investigator, Russia
BASIS

November 5, 1999

I. Background

At the urging of USAID's Global Bureau's Economic Growth Center, BASIS began inquiries about its possible involvement in developing a policy oriented collaborative research program in early 1999. An early meeting between Dr. Richard Blue, Principle Investigator for Russia, and USAID Mission leadership was not encouraging, as the Mission strategy did not include any further work in the agricultural sector. Mission leadership was discouraged with the lack of progress in reform of this sector, and saw little point in continuing with assistance. However, it continued to support a program designed to attract US investment in agribusiness. Also, the USAID had made a research grant to Dr. Ye. V. Serova, an agricultural economist at the Moscow based Institute for The Economy in Transition (the Gaidar institute).

The research paper prepared by Dr. Serova presented data from several oblasts (Russian provinces) on the performance and constraints to productivity of farms categorized by size and type of ownership/management. [1] Although the study demonstrated once again that household plots and family farms are the most productive farms in Russia today, the paper argues that the very large former collective and state farms will continue to dominate overall production output in Russia, especially in cereal grains. Dr. Serova's paper does not underestimate the difficulties most of these large farms face, including poor management, unprofitability and potential bankruptcy, poor technology, no access to credit, and inefficient productivity. Still, according to the Serova report, the political and economic realities in Russia are such that the large farm sector cannot be ignored. She finds that family farms have reached the limits of their growth potential. Household plots, will very important are largely dependent on the large farms, and most of their production remains in the barter economy. Therefore, policies and institutional arrangements must be found to restructure and revitalize the large farm sector of the agricultural economy.

[1] Eu. Serova The Impact of Privatization and Farm Restructuring in Russian Agriculture . Analytical Centre AFE (IET), Moscow, 1999.

These findings are controversial, especially among western advisors. Most would argue that Russian privatization reforms have been poorly managed and not very thorough. They conclude that there is still considerable room for development of "family farms", that is privately held and managed operations based on family ownership. Most would argue that the former collective and state farms should be allowed to go bankrupt and sold off, or opened up to "homesteaders" in the tradition of the American west. Western advisors do recognize that this approach would be difficult without further legislation regarding land rights and markets, now almost hopelessly confused due to incomplete reforms.

II. The Conference

As a follow-up to the Serova report, USAID Moscow agreed to provide financial support for a conference to discuss these findings. Dr. Serova submitted an interesting proposal which stated that the conference should be organized to achieve a specific result, namely, a consensus paper among Russian participants regarding what policy and regulatory actions must be taken to successfully restructure the Russian agriculture, with special reference to the large farms. She proposed a two day workshop wherein the first day would be devoted to technical discussions of her papers and others submitted by Russian researchers. At the end of the day, a consensus document would be prepared and discussed. On the second day, Russian policy makers and interest group leaders to hear the recommendations and to make their comments would join technical experts. A revised version of the consensus paper would then be prepared, signed by participants, and presented to government and other interested bodies.

This proposal was given to Dr. Blue who participated in discussions led by Dr. Christian Foster, an USDA expert on Russian agriculture then on loan to USAID, with various Russian leaders and experts, as well as with USAID Global Bureau officers. All encouraged BASIS to support the Serova workshop by involving American agricultural policy experts. The Deputy Minister of Agriculture specifically requested participation of Dr. William Thiesenhusen, a noted expert on land tenure and land markets in developing countries. Another frequently mentioned name was Dr. Bruce Gardner, whose textbook on agricultural economics is used in Russia. Dr. Serova stressed that

foreign participation would be limited in number and role, but welcomed BASIS participation. Dr. Thiesenhusen of the University of Wisconsin and Dr. Gardner, University of Maryland both agreed to participate and to prepare papers for the workshop. Later, Ms. Jennifer Duncan, a legal expert with RDI joined the BASIS team as an observer. Dr. Richard Blue also attended as an observer.

The workshop was held October 1 and 2 at a conference center named Golitsino, not far from Moscow. Russian participants made up the bulk of the attendees. The October 1 morning session was devoted to discussion of papers presented by Russian researchers. Three Russian experts, Dr. R.E. Praust, Dr. V. Ya. Usun, and Dr. A.N. Tarasov, presented papers following the discussion of the Serova paper. The afternoon session continued the discussion with short presentations from foreign invitees. In addition to the BASIS team, other foreign participants were Dr. Tomas Doucha, who presented the Czech situation, and Dr. Tibor Ferenczi, who reviewed farm restructuring efforts in Hungary. Dr. Zvi Lehrman, from Israel also made a presentation.[2]

Other research papers were circulated at the conference, or prepared in response to the discussions. Dr. Bruce Gardner's informal remarks are included in paper prepared immediately after the conference. [3] Mr. Roy Prosterman, Leonard Rolfes and Jennifer Duncan of the Rural Development Institute prepared and circulated a paper commenting on the Serova report[4]. A paper by Dr. Dmitri N. Rylko on the growth of various forms of "contract farming" was distributed as well.

[2] All papers prepared for the conference are attached IN DRAFT FORM as appendices to this report. The final report on the conference, included edited versions of the papers received, is in preparation by Dr. Eu. Serova. This report will be made available to the general public. Interested readers should visit the IET Homepage in the Internet at: WWW.IET.RU. Annex II.

[3] Bruce Gardner, "Issues in the Privatization and Restructuring of Russian Agriculture", October 1999. BASIS. Land Tenure Center, University of Wisconsin-Madison. Annex V.

[4] Prosterman, R, Rolfes, L, and Duncan, J: "Towards a Clear Concept of the Transformation of Russia's Agricultural Sector, RDI, University of Washington, Seattle, Washington, USA, September 1999. Annex IV.

III. The "Golitsino" Consensus

As stated in the proposal for this workshop, the aim was to develop a consensus document on conclusions and recommendations regarding the steps necessary to restructure the farm sector in Russia. The fact that the participants were able to prepare such a document is testimony to the seriousness of the discussion and the general agreement that certain steps must be taken to revitalize the sector. Whether the steps recommended by the Golitsino group will be taken, or if taken sufficient to improve the situation remains to be seen.

The main recommendations of the Golitsino group are summarized from the second draft handed out at the end of the workshop:

- Legal reforms including safeguarding rights of owners of land plots and shares, formalizing legal arrangements for lease and collatorlization of land, and bringing the status of all farms into line with the new Russian Civil Code
- Clarification of terms and improvement of the statistical data base for assessing, monitoring and analyzing Russia farm performance
- Addressing issues of rural economic and social development while completing turnover of social infrastructure to municipalities
- Tax legislation which recognizes the special character of agriculture[5]

The discussion leading to the Golitsino document was lively and for the most part supportive of the need to accelerate reform. From the observer's perspective, the discussion also reflected several continuing weaknesses in the process of formulating sound economic and social policy for this sector.[6] Some of these weaknesses are:

[5] The Golitsino group "final document:" is attached as Annex 1

[6] The critical perspective of the BASIS team is more fully developed by each team member in an informal paper prepared immediately following the conference at the request of the PI. These informal papers are attached as Annex V.

- Continuing weakness in the database for analyzing Russian agriculture. Field research data is collected from selected oblasts, but is difficult to aggregate to the national level. Reliable national data does not exist. Because of incentives to hide production and transaction data, what data there is may mask rather than illuminate reality.
- Analysis is often driven by desired outcomes, or is confused with descriptive presentation of facts. For example, the conclusion that household subsidiary farming will wither away is a conclusion not supported by the kind of analysis of net returns to each farmer, as Gardner points out in his commentary.
- Policy prescriptions seem to be based in part on an effort to rationalize in economic terms the growing political support for maintaining the "super farms" of the Soviet era. The implicit argument relates to economies of scale, which are believed possible only among the large farms. Efficiency, however, is a product of multiple factors most especially management which has learned how to run a successful agro-enterprise. A key question is how to use state policy, law and regulation to facilitate a process by which resources flow to efficient producers, rather than to "categories" of farms as determined by size or location.

These observed weaknesses notwithstanding, the workshop papers, discussion, and conclusions represent a significant step forward in the creation of a consensus of a variety of Russian interests around the need to proceed with vigorous reform. It was impressive to hear representatives of the private agribusiness sector, government directors, politicians, and farm managers present their views in a forum that encouraged open exchange and rational discussion, rather than rhetorical posturing and ideological platitudes. The process of building a consensus for policy reform is long and arduous. Dr. Serova and her colleagues are to be commended for taking this first step, as is USAID for supporting it. The most important observation is that Russians did the discussion and the recommendations in an open and transparent fashion. Foreign participation was valued, but the agenda and the outcomes were the product of Russians. Foreigners and Russians alike may fault the Consensus document, but

it is a very positive first step made by a "non-official" group which came together at Golitsino.

IV. After Golitsino: Follow-up

Dr. Serova and her colleagues have clearly stated their desire to continue the Golitsino group as an informal but influential forum for stimulating further policy research, debate, and consensus about what needs to be done. Whether there is a role for BASIS in this enterprise is a matter of some discussion and speculation. Clearly, both the Russian agricultural policy community and the American community could benefit from better data, better analysis and more informed agricultural policies. The US stake in the success of the Russian economic transition is well known, and does not need repeating. The successive failures of Russia's farm sector to produce sufficient cereals and feed grains has drawn in US farm surplus disposal programs and made us a factor in Russian agriculture, whether we like it or not. A continuing relationship between the American and Russian agricultural policy analysis communities would strengthen policies on both sides. BASIS is well suited to engage the Russians in a collaborative relationship. Interviews with Russian experts suggest that they would welcome such collaboration, so long as it was truly collaborative.

There is another reason for supporting policy research collaboration. The process we saw at Golitsino was as much an exercise in democracy and civil society in action as it was a workshop on issues of economic reform and economic growth. The experts came from a number of different organizations and regions. No single organization dominated. The organizers brought together elements of the Russian agricultural sector that had never before been invited to participate. These representatives participated in an open discussion in front of senior policy makers. Discussion was to some significant extent driven by facts and interpretations of those facts, imperfect as this process may be. The consensus document was widely and exhaustively discussed, revised by a working committee, and discussed again. From an American perspective, the Golitsino meeting was as much a "town meeting" about an important issue, as it was a formal academic workshop.

V. Recommendations

Following the Golitsino meetings I met with USAID Moscow leadership to discuss the workshop and to inquire about USAID intentions in taking next steps, if any. The response was to listen and to continue a dialogue. More formally, I was advised that USAID would not have a major interest in agriculture in the future, although it would continue with two projects in which there was strong USDA and Embassy interest. It would not be in a position to undertake anything new this year beyond these projects. I have continued to make the case that a BASIS Russia program makes good sense and would benefit US interests.[7]

As an additional step in developing a future relationship, I asked each member of the BASIS delegation to prepare a brief note commenting on the strengths and weaknesses of the workshop papers and discussion, and identifying what in their view the key research question might be. These papers are very thoughtful and useful first thoughts from three experienced and respected experts.

If BASIS were to receive an expression of interest from USAID Moscow, supported by USAID Global, I would recommend the following next steps:

1. Convene a workshop of American and selected international experts and policy makers concerned with Russian economic transition in agriculture. Invite Dr. Serova and other Russian experts from the Golitsino group to prepare papers and participate. The theme might be what should the US do to support Russian reform?

2. Prepare a collaborative agricultural policy research proposal with the Golitsino group. The proposal would have a multi-level strategy, ranging from a relatively low cost "BASIS Lite" type program, to a more

[7] My email memorandum to USAID Moscow Economic Growth Director Kevin Armstrong is attached, dated Nov. 5,1999.Appendix VII.

comprehensive research collaboration similar to BASIS projects in Southern Africa and elsewhere.

3. Actively market the proposal to USAID, USDA, the World Bank, and the European Union. The marketing strategy should engage Russian and American leadership working together.

This approach would require USAID Moscow's general support and interest, but not necessarily funding. Such funding would be very welcome and a sign of USAID Moscow's substantial interest. USAID Moscow is not the only organization with a substantial interest in the success of Russian agricultural reforms, and it should be possible to find matching funds with the BASIS contribution for this development effort.

Possible Research Projects
William C. Thiesenhusen's notes following
Oct. 1-2, 1999 Golitsyno Workshop
Farm Profitability, Sustainability and Restructuring

I. What has happened to the land shares that were given to workers, farmers, administrators and retirees at the time of *kolkhoz* and *sovkhoz* reorganization? Is there evidence that they are being transferred in some manner to administrators or managers of the reorganized farms? Is it possible to, with land shares, break off into private individual farms? How many rent their land shares back to the large farm unit at what price and for how long? What evidence is there, if any, that land share markets, formal or informal, are occurring? What is happening to equity in the process? What is happening to farm efficiency in the process? What becomes of those who have been stripped of their land shares? Make the same analysis using property shares and property plus land shares.

II. Much that is pessimistic has been written about the land reform in Russia over the past decade. But there have been positive developments also. Study several profitable restructured farms and determine what accounts for their profitability. What has happened to efficiency (value added per worker)? What has happened to equity? What is the prognostication for the future and why?

III. Total factor productivity and total value added per worker have been suggested as measures of efficiency for restructured farms. How "efficient" are reorganized large state farms in comparison to private individual farming units and auxiliary farms? Study this issue using farm management study methodology on a sample of those farms.

IV. Most studies indicate a resistance on the part of workers to embark on private individual farming (PIF). Indicate the potential scope for PIF in Russia and prioritize the constraints which cause peasants to resist family farming with a careful field study of the matter.

V. Many studies indicate that the social functions of reorganized farms (like providing schools, health clinics, child care, etc.) should be transferred to municipal governments. This recommendation was first made by the World Bank in 1992. Why have so few farms transferred their social functions and what does this imply for the social safety net of nearby private individual farmers?